ANNUAL MANAGEMENT REPORT
-1983-
LOWER COOK INLET
REGION II

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

ANNUAL
FINFISH MANAGEMENT REPORT
-1983-
LOWER COOK INLET

STAFF

Area Management Biologist.....Thomas R. Schroeder
Assistant Area Management Biologist.....Lee F. Hammarstrom
Clerk Typist.....Donna Coble
Data Control Clerk.....Hazel Vanderbrink

Regional Office: 333 Raspberry Rd., Anchorage, Alaska 99502
Area Office: P.O. Box 234, Homer, Alaska 99603

January, 1985

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF TABLES (CONTINUED)

LIST OF APPENDIX TABLES

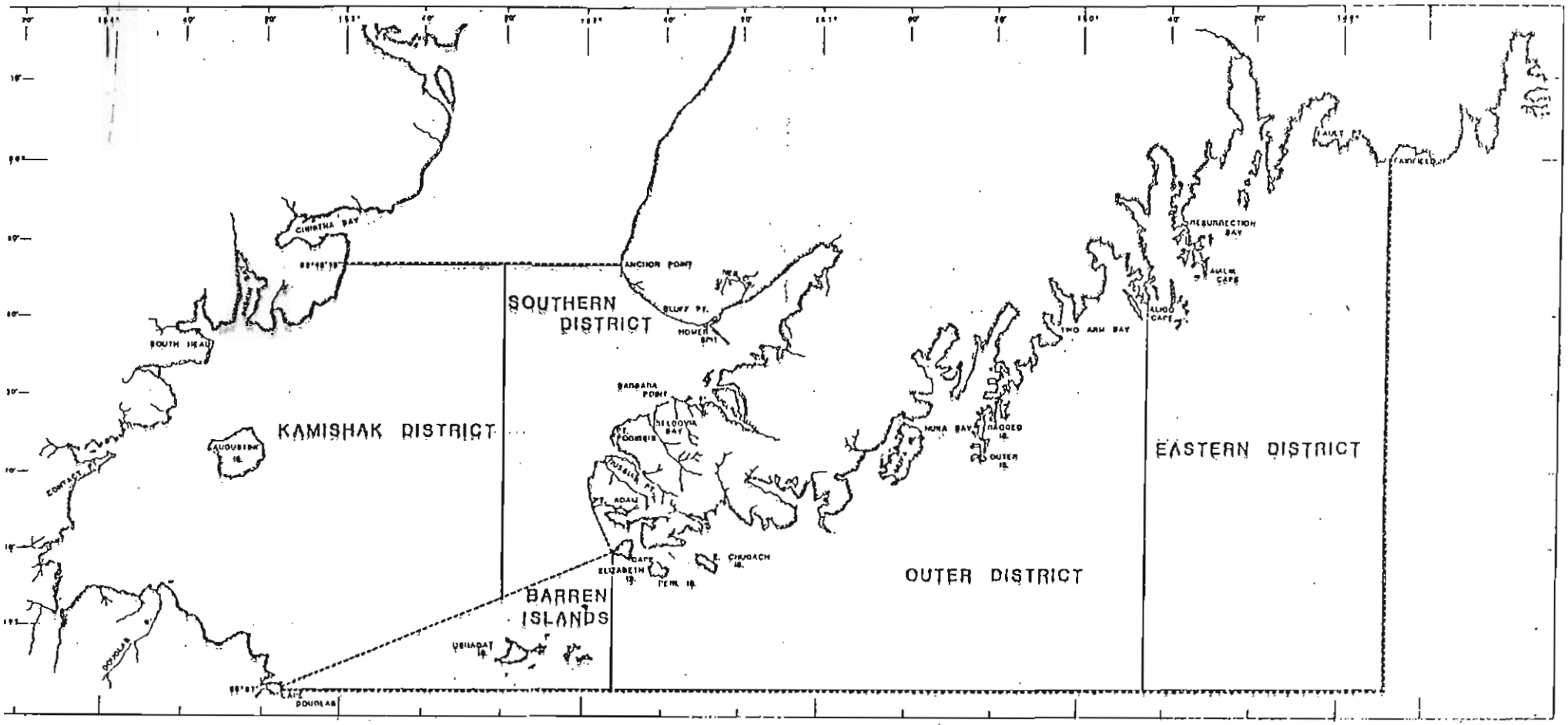


Figure 1. Lower Cook Inlet Management Area.

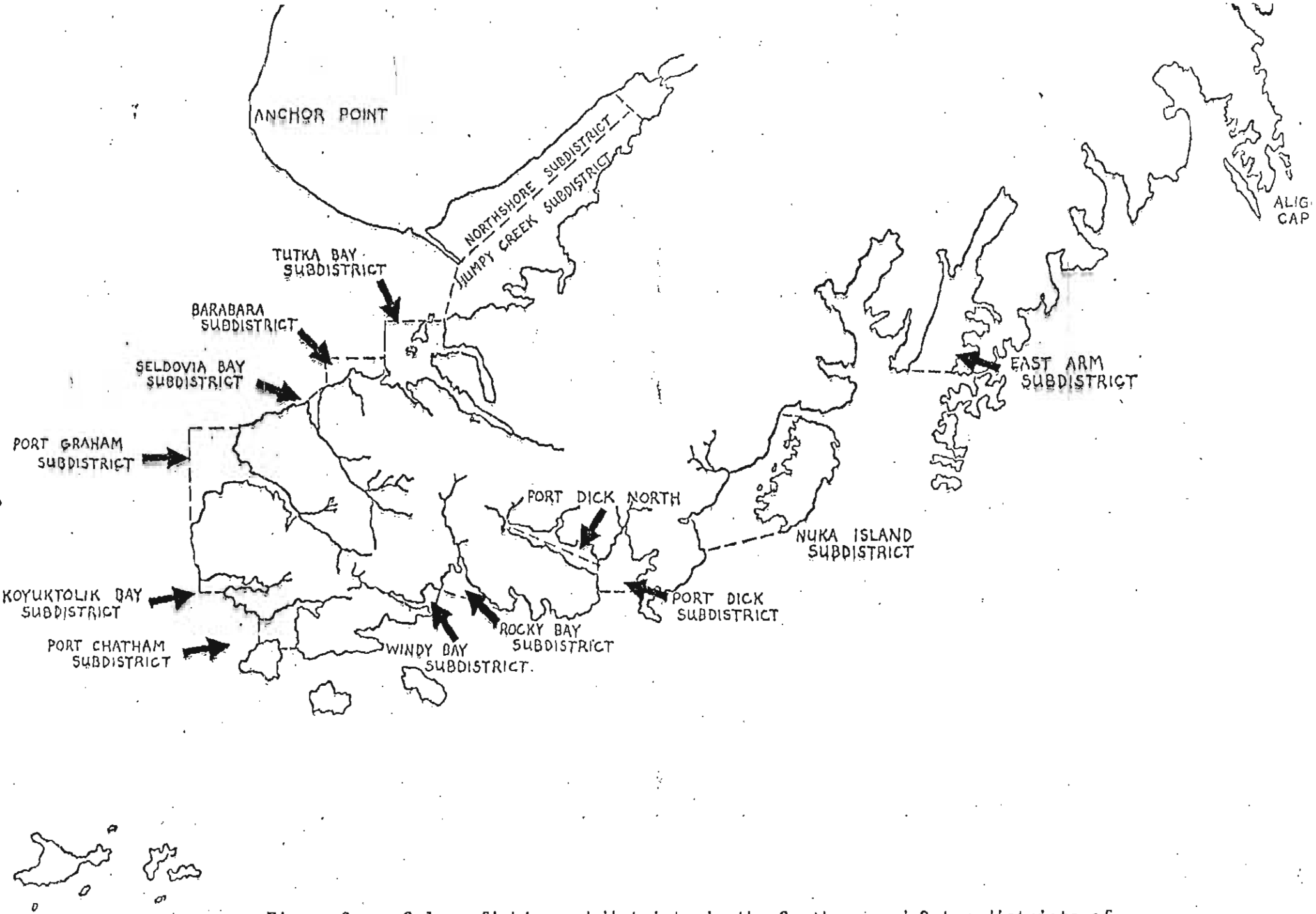


Figure 2. Salmon fishing subdistricts in the Southern and Outer districts of Cook Inlet.

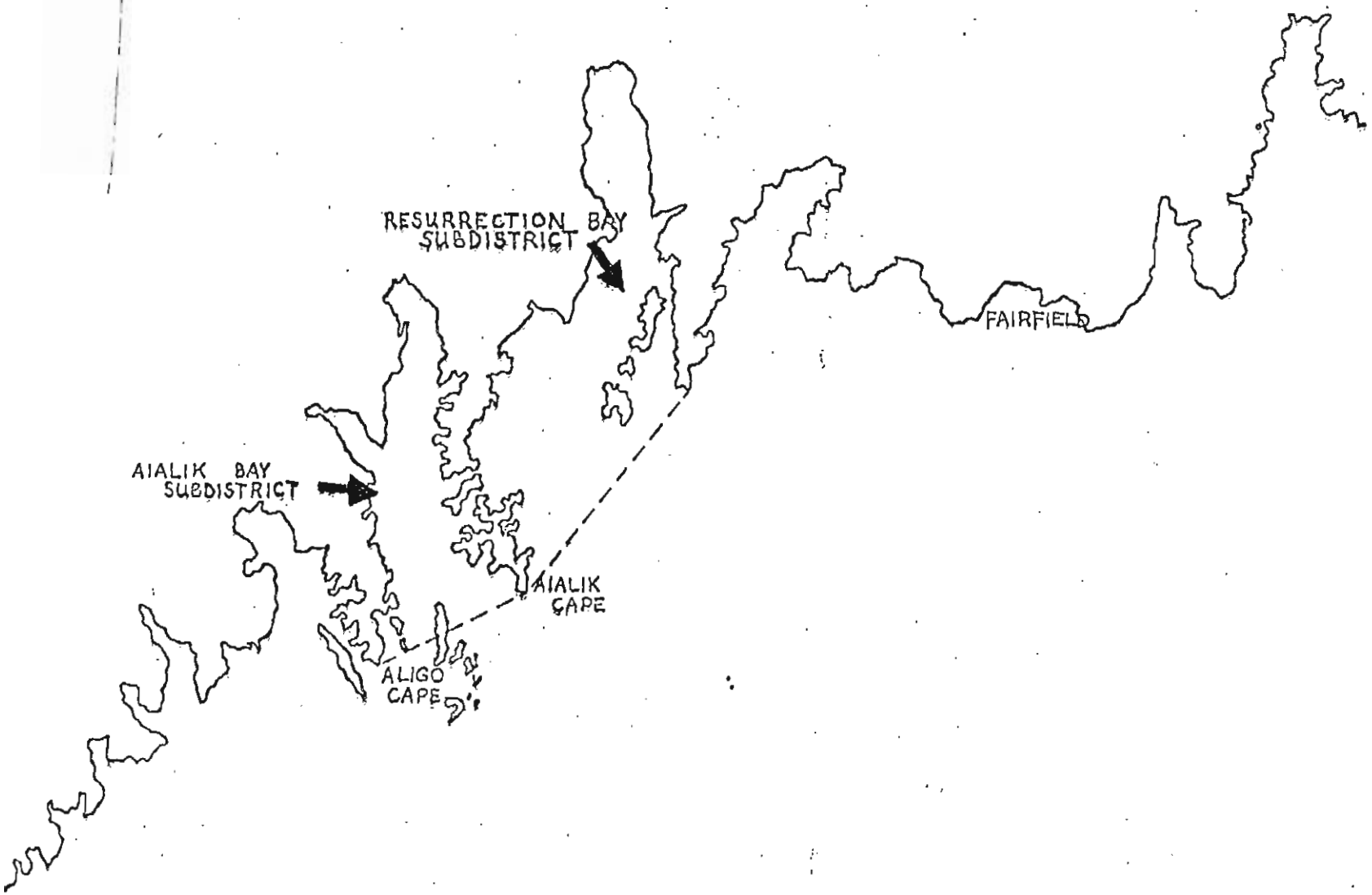


Figure 3. Salmon fishing subdistricts in the Eastern district of Cook Inlet.

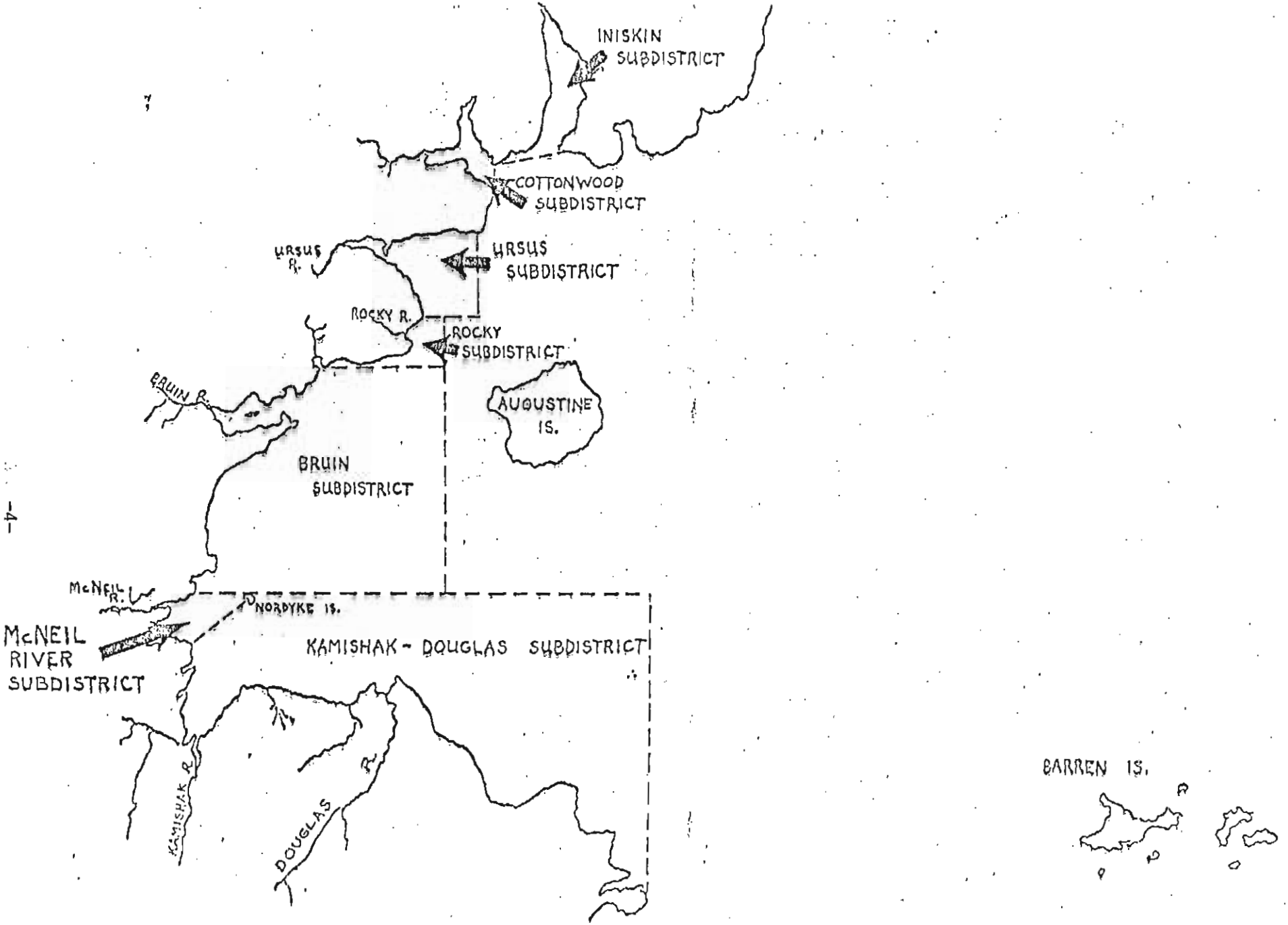
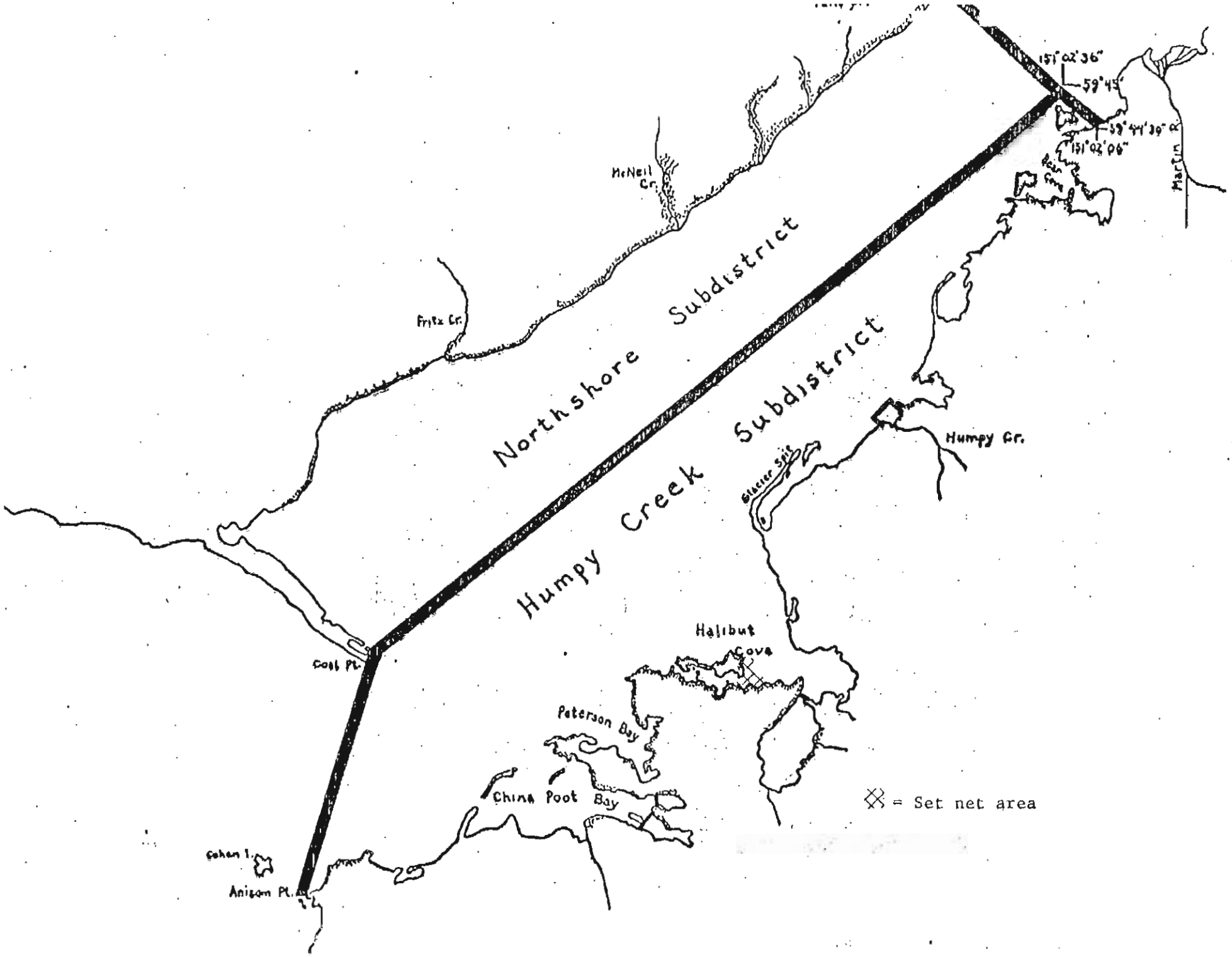


Figure 4. Salmon fishing subdistricts in the Kamishak Bay district of Cook Inlet.



Revised June 1, 1980

Figure 5 . Set net locations in the Humpy Creek Subdistrict of Lower Cook Inlet.

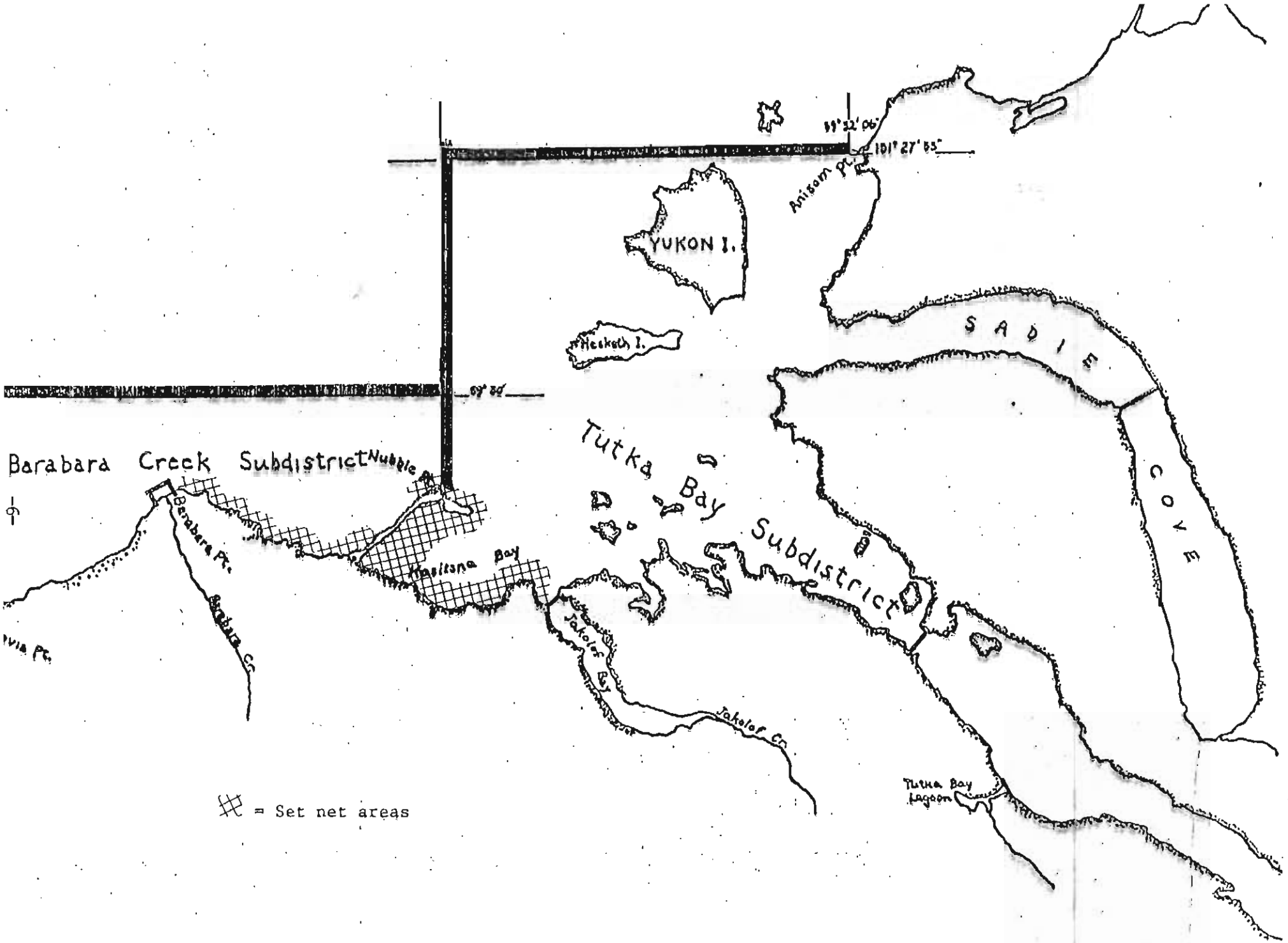
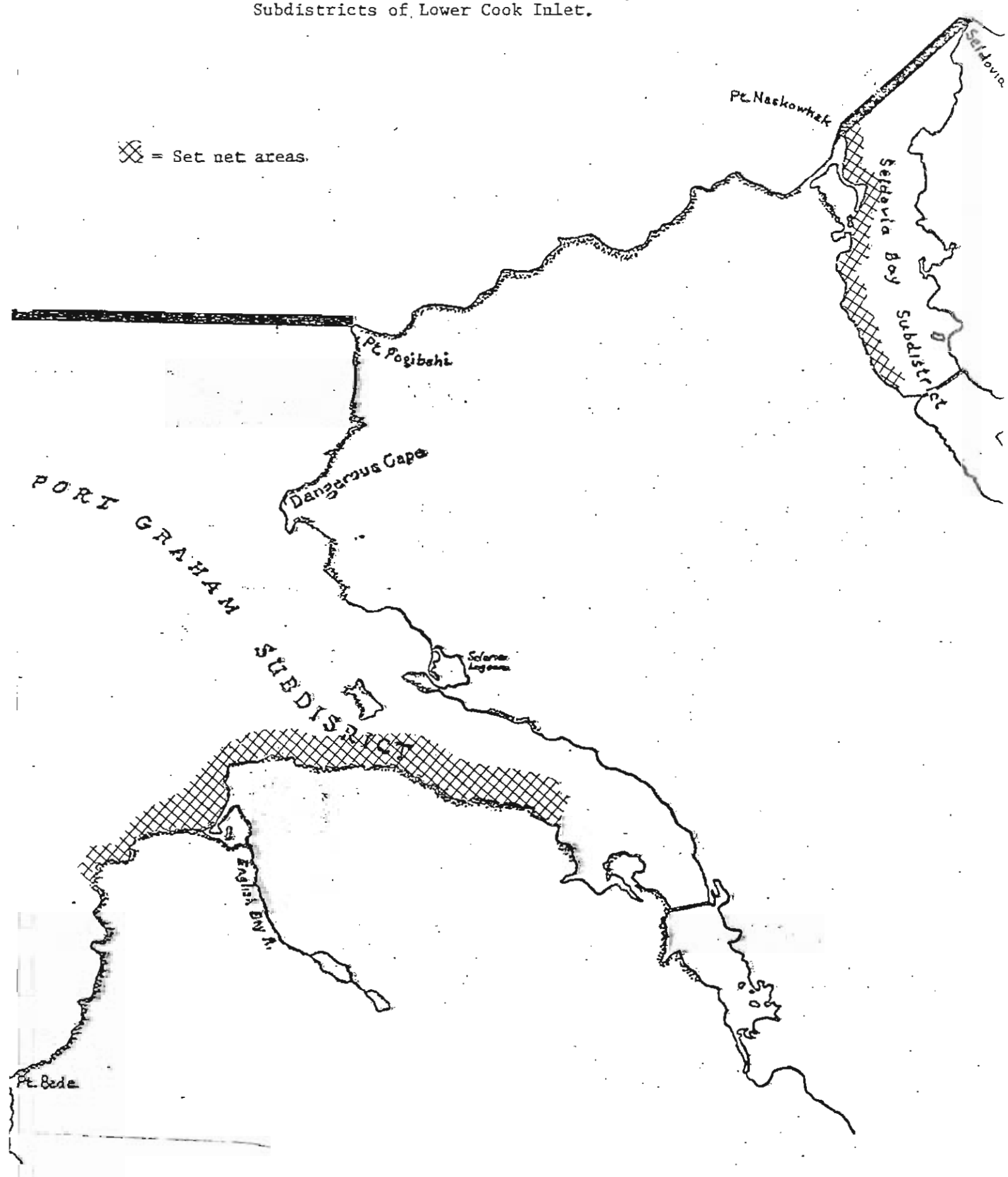


Figure 6. Set net locations in the Tutka Bay and Barabara Creek Subdistricts of Lower Cook Inlet.

Figure 7 . Set net locations in the Seldovia Bay and Port Graham Subdistricts of Lower Cook Inlet.



ANNUAL MANAGEMENT REPORT

LOWER COOK INLET

-1983-

INTRODUCTION

The Lower Cook Inlet management area is comprised of all waters west of the longitude of Cape Fairfield north of the latitude of Cape Douglas and south of the latitude of Anchor Point (Figure 1). The area has been divided into five fishing districts (Southern, Kamishak Bay, Barren Islands, Outer and Eastern) all of which are salmon producers except for the Barren Islands district, which is primarily a shellfish district (Figure 1). The remaining four districts have been further divided into 25 subdistricts and sections to facilitate management of discrete stocks of salmon (Figures 2-4).

The salmon fishery has historically been a hand purse seine fishery with a limited number of set gillnets allowed in the Southern district and drift gillnets allowed in the Resurrection Bay area prior to 1976. Set gillnetting is restricted to very limited beach areas along the southern shore of Kachemak Bay in the Southern district (Figures 5-7).

The 1983 Lower Cook Inlet salmon catch of 1,316,066 was comprised of 873 king, 184,641 sockeye, 10,782 coho, 927,451 pink and

192,319 chum salmon (Table 1). Catches of all species were above average and the total harvest was 41 percent above the 30 year average (Table 16 and Figures 8, 9, 10 and 12). The harvest was highlighted by: (1) a record harvest of sockeye due entirely to the 84,000 sockeye harvested from the return to the Leisure Lake stocking project; (2) a chum salmon harvest that was 45 percent above average; and (3) the second largest pink salmon return to the Tutka Bay Hatchery (Tables 1 and 16 and Figure 13). Escapements of all species were generally considered good in all systems, but low water flows during July and August affected the spawning success in several pink and chum salmon streams (Tables 2-4).

The 1983 season saw a variety of successes and disappointments in the returns to the Lower Inlet. While the overall harvest appears excellent at first, over 51 percent of the harvest was produced by hatchery or other aquaculture projects. The natural return of pink salmon to the Southern and Outer districts of 543,925 was only 30 percent of the pre-season forecast of 1,837,600 and the Tutka Bay Hatchery return of 666,517 (Table 6) was only 75 percent of the mid-point of the forecasted return of 607,500-1,166,100 and was the first odd-year return that has not been at or above the upper end of the forecasted return.

Set net effort consisted of only 24 permits, which was a 40 percent reduction in effort from the previous five years (Appendix Table 1). Seine effort during the 1983 season was 85

permits, 40 percent above average for the area, but typical of the dominant odd-year cycle effort (Appendix Table 1). Economically, the 1983 fishery was very poor for fishermen. Prices paid by processors were low for all species and, coupled with the large odd-year seine effort, resulted in low earnings for most permit holders. The ex-vessel value of the 1983 harvest was estimated at $1,627,000 (Appendix Table 2) based on average weights and prices listed in Appendix Tables 3 and 4. Indications were that a retroactive settlement of 4-7 cents per pound for pink salmon would occur in the spring, but Department records never reflect these settlements. Such a settlement would raise the ex-vessel value $111,000-195,000.

The case pack and fresh, frozen, and cured production data contained in Appendix Tables 5 and 6 are for the entire Cook Inlet area and also contain salmon imported from other areas of the state. Data contained in these two tables reflect the market conditions and trends that existed in 1983. Large holdings of frozen salmon from the 1982 season were evident in the increased case pack of canned sockeye salmon and the movement away from fresh, frozen, and cured production of pink and chum salmon.

SOUTHERN DISTRICT

Sockeye Salmon

The Southern district sockeye salmon harvest had a complete "face-lift" in 1983. Set gillnets have historically harvested over 80 percent of the sockeye salmon in the Southern district, but over 68 percent of the 1983 harvest was taken by seines (Tables 1, 15 and 17). This was due entirely to the first return of major proportions to the Leisure Lake stocking project. The China Poot section of the Humpy Creek subdistrict was opened simultaneously with the Tutka Bay subdistrict on June 27 to harvest the strong expected sockeye salmon return to Leisure Lake. Seiners harvested over 73,000 sockeye salmon in China Poot Bay and seiners and set netters in the Tutka Bay area harvested an additional 10,800 sockeye, based on scale patterns from AWL samples taken in the area (Schroeder,1984).

An intensive sport fishery and dip net fishery has developed on this return. FRED personnel estimated the harvest for both user groups to be 6,390 sockeye. The personal use dip net fishery was allowed throughout the month of July due to the strong expected return and no harvest permit was required as in the past. The total 1983 Leisure Lake sockeye return was estimated at 91,000 fish which represented a phenomenal ocean survival of 37.8

percent from the smolt outmigration of 241,000 smolt in 1981. Such ocean survival rates are unheard of and the return of five year old fish in 1984 will push the ocean survival even higher.

AWL samples taken in 1983 indicated that over 97 percent of the Leisure Lake sockeye were four year old, two ocean fish and averaged 4.5 lbs (Schroeder, 1984). This is similar to the 1980 and 1981 returns to this area and is representative of the Tustemena Lake brood stock which tends to return as four and five year old, two ocean fish.

The English Bay Lake sockeye return is the only other major sockeye stock in the Southern district. Catches were good in early June and while the escapement of 12,000 (Table 4) was considered good, the distribution of the escapement favored the upper lakes. Set gillnetting in the Port Graham subdistrict was closed from June 27 until June 29. This additional 48 hour closure allowed sockeye bound for the lower lakes to move into the system and the subdistrict was reopened on June 30.

Pink Salmon

The Southern district pink salmon harvest of 690,098 was the fourth highest on record and more than double the 30 year average harvest for this district (Table 17). The return to the Tutka Bay hatchery provided 597,000 pink salmon or 86 percent of the district harvest (Table 6). The total hatchery return of 666,517

pink salmon was only 75 percent of the mid-point of the forecasted return range of 607,500-1,166,100. Past odd-year survival rates have been between 5-10 percent, but 1983 survival rates were greatly reduced and ranged between 2.31 and 2.58 percent for various release groups of fry.

The Tutka Bay subdistrict was opened similar to previous years on June 27 in anticipation of another strong return to the Tutka Bay Hatchery. Effort was greatly reduced over past years due to the strong sockeye return to Leisure Lake and another strong chum salmon return in the Kamishak district. Pink salmon moved into Tutka Lagoon very quickly and the first of four openings in the lagoon occurred on July 14. Fish did not appear to hold or school up in coves outside of the lagoon as occurred in 1981 which hastened the buildup of fish in the lagoon. The four lagoon openings produced a harvest of 98,000 pink salmon (Table 7). An additional 53,800 adults were taken for hatchery brood stock (Table 6). This was a larger number of adults than would normally have been needed, but was necessary due to a higher than normal holding mortality. The total pink salmon harvest in the Tutka Bay subdistrict of 615,431 was second only to the 1981 record harvest (Table 11). Escapement of pink salmon to Tutka Creek was considered good (Tables 2 and 8).

The Seldovia Bay subdistrict was opened on July 7 after aerial surveys indicated a good buildup of fish inside the closed fishing area at the head of the bay. Catches remained weak

throughout the run and no strength in the return was observed. A short two hour marker movement was allowed by flare on July 25. The escapement of 27,900 was considered good and the total harvest of 43,100 was the lowest odd-year harvest since 1973 (Tables 8, 11 and 12).

A good pink salmon return was expected to the Port Graham subdistrict based on alevin densities observed in the spawning stream (Table 10). The subdistrict was not opened until July 18 and was closed on July 26 after only 5 1/2 days of fishing. The harvest of 2,400 pinks and escapement of 4,600 were both considered extremely poor (Tables 2, 8 and 11).

The Humpy Creek return was expected to be average, but after the poorer than expected returns to other streams in the Southern district it was not unexpected when the Humpy Creek return was poor. The subdistrict was opened on July 18, but very little effort moved to Humpy Creek from either Tutka Bay or China Poot. Low effort coupled with peculiar fish movements resulted in the majority of the fish moving right through the boats fishing this area. The harvest of 18,300 pink salmon was the lowest odd-year harvest since 1971 while the escapement of 104,800 was double the desired level for that stream (Tables 2 and 11).

Over 5,500 pinks harvested in the Humpy Creek subdistrict were taken in China Poot Bay. With lower than desired escapement of pinks, the China Poot section was closed on August 6. Most

fishing effort retired for the season with the Tutka return over and the poor showing in other subdistricts and when additional fish arrived in China Poot later in August, no effort was available to harvest the fish. The pinks moved quickly onto the spawning grounds and the escapement of 14,100 was almost triple the desired goal (Table 2).

Excellent spawning escapements were achieved to all major spawning streams in the Southern district with the exception of Port Graham and several minor streams received good escapements (Table 2). Jakalof Creek went completely dry again in late July and early August and stranded 5-6,000 pinks in the stream and intertidal area of the creek. This was the second year in a row that the creek lost its entire spawning escapement.

Miscellaneous Species

Chum salmon are a relatively minor species in the Southern district, but the 1983 harvest of 14,281 was considered good (Table 17). The Tutka Bay subdistrict harvest of 9,700 chum salmon was the third year in a row of excellent harvest and while these fish were not sampled, it appears as though the large catch was a result of a return of five year old fish from the 1978 egg take at the Tutka Hatchery. The Port Graham harvest of 1700 was the lowest since 1976 and the escapement to Port Graham River was also poor (Tables 3 and 13).

The coho salmon harvest of 3,589 was average for this district (Tables 15 and 17). However, the harvest was artifically held down due to the lack of processors available to purchase set net caught cohos from the Port Graham and English Bay area. The set net fishery had averaged 6,195 coho during the previous five seasons with the vast majority usually taken in the Port Graham subdistirct. Returns did appear weaker than previous years, but did not account entirely for the lower harvest.

OUTER DISTRICT

Sockeye Salmon

The sockeye harvest of Delight Lake and Desire Lake returns was expected to be 30-35,000 fish based on parent year spawning escapements. However, due to the record return and harvest in 1982, which contained a very high percentage of four year old fish, the 1983 return did not show as strong as expected. Sockeye began arriving on schedule in mid June and by June 24 aerial surveys indicated enough fish were present inside of areas closed to fishing, lagoons or lakes to meet minimal escapement levels and the subdistrict was opened on June 27.

This year marked the second year in a row where Delight Lake has been the strongest producer of the two lakes. Fishing effort shifted immediately to the mouth of Delight Lake Creek and only sporadic fishing occurred at Desire Lake. Sockeye at Desire Lake moved rapidly through the area and into the lake and the stream markers were removed at noon on July 1 after the escapement level had reached 8,000 fish. Even with good fishing effort, the Delight Lake escapement continued to climb. A marker movement was made on July 6 which opened McCarty Lagoon and allowed fishing up into the mouth of the creek.

Markers were eventually put back in effect at Desire Lake on July 26 to protect pink salmon bound for the stream. Escapements to both lakes were good (Table 4); however, for the second year in a row the outlet of Delight Lake and lagoon went dry due to low rainfall. Approximately 1500 sockeye were stranded in the lagoon for 10-14 days and it is unknown whether this delay affected the spawning success of those fish. The sockeye harvest for the Nuka Bay subdistrict of 16,835 was considered good and was 60 percent above average for the Outer district (Tables 14 and 18).

Pink Salmon

The Outer district pink salmon run was not expected to be strong in most areas. Alevin densities observed during pre-emergent fry sampling on most streams in 1981 were greatly reduced from levels observed in 1977 and 1979 that produced excellent returns (Table 10). Alevin densities were still high enough to produce strong returns if other environmental conditions worked towards high survival rates. However, it was obvious from aerial surveys in early July that this was not to be the case.

The Outer distirct pink salmon harvest of 199,794, taken primarily from Port Dick and Nuka Bay, was only 50 percent of the average harvest for this district and was only a fraction of the previous three odd-years' returns (Tables 10 and 18). In general, runs increased in strength moving easterly through the

Outer and Eastern districts and it is possible that some ocean phenomenon caused a differential survival rate on certain stocks based on their stream origin or feeding location in the Gulf of Alaska.

The Port Chatham subdistrict was opened for two 48 hour periods from July 18-20 and July 21-23 primarily to harvest chum salmon that had built up in good numbers. The pink salmon return never materialized and the return was evenly split between catch and escapement (Tables 2 and 11). The escapement of 3,500 fish was poor and only a third of the desired escapement level.

Pink salmon returns did not show at all in the Windy Bay and Rocky Bay area. These two subdistricts were opened simultaneously with the remainder of the Outer district for one 48 hour period on July 18-20. Only 1300 pinks were harvested as the opening was targeted primarily on chum salmon (Tables 11 and 13).

It was obvious during early aerial surveys of Port Dick Bay that the strong odd-year return was not going to occur in 1983. During the previous three odd-year returns when the Port Dick returns equalled or exceeded one million fish, very large numbers of pink salmon were already schooled along the shoreline by the first week of July. Fair numbers of pink salmon began schooling on the beaches during the second and third weeks in July. The first pink salmon opening occurred on July 18, although the outer portion of the subdistrict had been opened on July 7 to harvest

chum salmon bound for Island Creek. Some pink salmon were harvested during the early part of July during the chum salmon openings and tended to slow the buildup of pinks in the upper part of the bay. The subdistrict was open to seining for three consecutive 48 hour periods and was finally closed on July 27. Over 20,000 fish had accumulated on the flats at the head of the bay during the fishery, but the fish did not readily move upstream through the weir and a closure was necessary to prevent the harvest of fish backing outside of the markers during severe low tides.

A hole was discovered in the weir on July 27 after aerial surveys indicated far more fish upstream than had been counted through the weir. After correcting the upstream escapement counts and fixing the weir, the escapement began increasing at a good pace and the reopening of the subdistrict was announced for August 1. Fourteen boats harvested 30,000 pinks on the first day, but only 10,000 on the second day, which indicated a slow movement and buildup of fish from the second run to Port Dick. Effort dropped to only seven boats on August 4 and catches remained low. The subdistrict was closed on August 6 as considerably more fish were needed for escapement in Head End Creek and the Island Creek pink return had not begun arriving in any numbers.

Surveys of Port Dick Bay between August 9 and 11 indicated a strong buildup of pink salmon in the Island Creek area and the subdistrict was reopened on August 12 for 24 hours and then for

48 hours from August 15-17. Markers at Island Creek were adjusted at noon on August 12 to try and harvest the surplus pink salmon. Escapements to Port Dick Creek and Island Creek were considered good, although the upstream portion of the escapement at Port Dick Creek was below optimum (Tables 2 and 8).

The Nuka Bay area experienced an average pink salmon return. Unlike 1981, when strong returns occurred to numerous small bays and streams in the area, the 1983 harvest was concentrated primarily at South Nuka Island Creek and Mike's Bay on Nuka Island and at James Lagoon and Desire Lake Creek in the East Nuka subdistirct.

The entire Nuka Bay area was opened to seining on July 18 after aerial surveys indicated fair numbers of pink salmon building up in many areas. The entire area remained open, except for a special closed area around Petrof River, until July 27 when the Nuka Bay area was closed except for the East Nuka and Nuka Islands subdistricts.

Markers at Desire Lake Creek were put back in effect on July 26 to protect pink salmon needed for escapement purposes. Pink salmon continued to arrive in good numbers at South Nuka Creek and markers were adjusted for 2 1/2 hours on July 28 and for 6 hours on August 3 to harvest fish which were surplus to escapement needs. Fish moved quickly through the small number of boats at South Nuka and the escapement of 22,000 was over twice

the desired level. Escapements for Desire Lake Creek, James Lagoon and Mike's Bay were estimated at 12,000, 6,000 and 6,000 respectively, although they are not presented in tables included in this report. These escapements were all considered excellent and several minor streams in the area also had fair spawning escapements. The entire area was closed on August 6 after aerial surveys of the area indicated that there was no further buildup of fish in the area.

Chum Salmon

The Outer district chum salmon harvest of 27,203 was 65 percent below average and far below expected return levels. In the past, chum returns to this district have been reflective of the pink salmon returns two years prior (Table 18). This appears to be a result of excellent ocean survival conditions experienced by both species during a given year. Based on the excellent 1981 pink salmon harvest, the 1983 harvest of chum salmon in the Outer district should have been 2 to 3 times the 30 year average. The 1978 and 1979 chum salmon escapements to streams in this district were good to excellent and the run failure is totally unexplainable.

Chum salmon began arriving on schedule at Dogfish Bay in expected numbers in late June. An aerial survey on June 28 indicated a good buildup in the lagoon in just two days and the subdistrict was opened on June 30. Fishing effort and catches remained low

throughout early July. Aerial surveys indicated that chum salmon were building in the Port Chatham area, which is usually an indication of additional fish bound for Dogfish Lagoon streams. A 48 hour opening of the Port Chatham subdistrict on July 18-20 harvested 2,100 chums and stopped the buildup at Dogfish Lagoon. Both subdistricts were closed on July 20 and the Dogfish Bay harvest reached only 2,800 fish (Table 13). Escapements of chum salmon to these two systems were considered fair (Table 3). Escapement to Dogfish Lagoon streams was felt to be higher than the level calculated using average stream life. Aerial surveys consistently accounted for more fish than the final escapement estimate and it is possible that long holding periods in the lagoon due to low water levels in the spawning streams lowered the average stream life of the spawning fish. This same phenomenon occurred in 1982.

The Rocky Bay subdistrict was opened for only one 48 hour period from July 18-20 and resulted in a harvest of 3,200 chum salmon (Table 13). The escapement of 4,000 chums was considered poor (Tables 3 and 9) and the 1983 management of this system represents a complete change in direction. Since 1975, excellent pink and chum salmon escapements have been achieved during various years, but have not produced good returns. Extensive flooding and poor survival of fry have resulted in very poor returns from excellent spawning escapements and the subdistrict has only been extensively fished during two of the last nine years. Plans for the future are to allow a limited harvest in

this area while providing for only minimal escapements, since it appears from the past performance of this sytem that large spawning escapements are being wasted in an unstable spawning and rearing area.

The Port Dick Bay area was expected to produce an excellent harvest of chum salmon in 1983. Aerial surveys in late June indicated good numbers of chum salmon accumulating along most of the north shore of the bay. By July 5, over 7,000 chum salmon were protected inside the markers at Island Creek and an opening was announced for the Port Dick subdistrict for July 7. The opening was restricted to waters southeast of the Middle Creek to Shelter Cove line that is often used to protect pink salmon headed to Port Dick Creek. Chum salmon began to move closer to and into Island Creek and fishing markers were adjusted on July 14 to open the lagoon area east of Island Creek to fishing.

Chum salmon harvests were poor throughout the season at Island Creek, and minimal effort in the area resulted in excess spawning escapement reaching the stream (Table 3). The harvest of 18,000 was considerably below the recent odd-year trend since 1975 (Table 13) and was a definite disappointment.

The Petrof Glacier chum salmon return never materialized. Although the escapement was considered fair (Table 3), no fishing was allowed on this return throughout the entire season. The good escapement of 4,500 chum salmon in 1979 was expected to

produce a strong four year old return due to the excellent pink salmon survival and return to this area from the same parent year spawning escapement.

KAMISHAK DISTRICT

Sockeye Salmon

The Kamishak-Douglas, McNeil River and Bruin Bay subdistricts are the only areas in the Kamishak district that have sockeye returns. Most are relatively minor and only one significant lake system is presently producing harvestable numbers of sockeye salmon. These three subdistricts were all opened on June 9 to fishing seven days per week after aerial surveys on that day indicated approximately 4,400 sockeye were already schooled in the intertidal lagoon area of Mikfik Creek. This return has always built quickly in the past and 1983 was no exception. Surveys on June 6 indicated only 140 sockeye in the lagoon and less than 24 hours after the June 9 survey and opening, over 3,000 sockeye had already moved into the lake. The buildup in the lagoon was monitored daily and on June 15 survey conditions allowed an accurate aerial estimate of the total escapement into the lake. The McNeil River Lagoon area was opened at 10:00 a.m. June 15 immediately after the aerial survey indicated over 6,000 sockeye salmon in Mikfik Lake and an additional surplus of over 2,000 sockeye schooled in the lagoon.

The overall harvest of 4,900 sockeye at Mikfik Creek was considered good for this small system. One of the undesireable

aspects of this return is that the fish are extremely small compared to normal sockeye of the same age and averaged only 3.44 pounds this year.

Approximately 3,500 sockeye were harvested during late June and the first week of July from the Kamishak River and Douglas River returns. These sockeye are easily distinguished from other returns to this district as they usually average 5.75 to 6.25 pounds. Another return, which has been building the past two seasons, was harvested for the first time since the late 1940's or early 1950's. Due to stocking sockeye fry, returns to Chenik Lake have built to levels where fair to good spawning escapements are once again being achieved. A short 15 minute opening by flare was allowed on July 11 and resulted in a harvest of 2,800 sockeye salmon. These fish were extremely small and similar to the Mikfik sockeye. An excellent spawning escapement was achieved and is the third year of increasing sockeye escapements to this lake, which produced total returns of 20,000-120,000 fish back in the 1930's.

The only other sockeye system in the Kamishak district is Amakdedori Creek. Very little harvest has occurred on this return in past years. An emergency order allowing fishing up to the mouth of Amakdedori Creek was issued on June 22 to encourage effort in this area, but no harvest occurred. The Kamishak district sockeye harvest of 11,207 was considered excellent for this district and was over four times the 30 year average (Tables

1,14 and 19).

Pink Salmon

There are three major pink salmon spawning streams in the Kamishak district, Bruin Bay River, Sunday Creek (Rocky Cove) and Brown's Peak Creek, that usually produce the entire pink salmon harvest in this district. Pink salmon spawn in most other spawning streams in the district in limited numbers, but very few fish have ever been harvested from returns to these streams. The 1983 pink salmon harvest of only 1,405 fish was only a fraction of the average harvest for this district (Table 19) and was indicative of both the poor spawning success of the excellent 1981 escapements and the present dominance of the even-year cycle return. Although these streams are not sampled for pink salmon alevin densities and over-winter survivals, it is possible that severe flooding which occurred during the fall and spring in other districts of Lower Cook Inlet, could have affected survival in these streams as well. No specific pink salmon openings were made in 1983 and the harvest was made incidental to directed chum salmon openings in the Bruin Bay subdistrict.

Chum Salmon

The Kamishak Bay district was expected to have an excellent chum salmon return in 1983 based on the high escapements in 1978 and the recent trend towards returns of five year old fish. The

harvest of 142,901 was a new record, surpassing the previous record set in 1982 by 31 percent, and was almost four times the 30 year average for the district (Tables 1 and 19). While the total return was excellent and escapements were achieved in all systems (Table 3), the Ursus Cove and Cottonwood Bay subdistricts continue to produce at levels that are inconsistent with adjacent subdistricts and far below expected levels.

The McNeil River chum salmon return is always the first to arrive in this district. Large, older age chums begin to arrive at McNeil River in late June on the tail end of the Mikfik sockeye run. McNeil Lagoon, which was open to seining to harvest sockeye bound for Mikfik Lake, was closed on June 22 and the Kamishak-Douglas and McNeil River subdistricts were put back on the standard two 48 hour weekly fishing periods in anticipation of the arrival of early McNeil River chum salmon.

Catches began building quickly during the first week of July. Aerial surveys on July 5 and 6 indicated very few fish were moving into the lagoon and that the intense fishing effort was virtually stopping the run. The chum salmon harvest reached 34,000 and a closure for July 6 was announced for the McNeil River subdistrict. Another survey on July 11 indicated over 12,000 fish had moved into the lagoon during the five day closure and the subdistrict was reopened on June 12. The fish began moving readily through the seine fleet and on July 19, after an aerial survey indicated the chum salmon escapement had reached

35,000 with excellent numbers upriver past the falls, fishing in the subdistrict was extended to seven days per week. The final harvest of almost 70,000 chums in McNeil was a record and the 48,000 fish escapement presented considerable promise for the future (Tables 3 and 13).

Chum salmon returning to Bruin Bay accumulated in the intertidal "pothole" quickly in mid July with no fishing effort to slow the run. The first "pothole" opening was allowed between July 11-15 and a second opening July 24-27. A total of 2,600 chums were harvested during these openings (Table 13).

The Kamishak River system and Douglas River chum returns began to arrive during the latter part of the McNeil River run. While the Douglas River system has numerous chum salmon returns, it is felt that the majority of the harvest in this area are fish bound for the Kamishak River system. Past age class and average weight data have further substantiated this hypothesis (Schroeder,1984).

The 1983 harvest from these two areas was 51,100 and was second only to the 1981 harvest of over 55,000 (Table 13). Weather plays a very important role in the harvest of the Kamishak River and Douglas River chum salmon returns. Unusually calm weather in 1983 allowed fishermen to be very effective in stopping the return. This resulted in the necessity of closing the subdistrict on July 24 to achieve adequate escapement to the Kamishak River system. Excellent escapements were achieved in Big

and Little Kamishak Rivers, but the Douglas River system (Silver Beach and Main Left) did not receive many fish (Table 3). The subdistrict was reopened on August 1 after escapements to the Kamishak River system were assured.

The Bruin Bay subdistrict was opened on June 9 to harvest runs of sockeye in the area and was left open to seining on a seven day per week basis to encourage early effort on the chum salmon return which was expected to be strong. Movements of fish into the river and intertidal "pothole" appeared strong in mid July. The "pothole" was opened to seining from 12:00 noon July 11 until 6:00 p.m. July 15 in anticipation of the return building and the fact that the seiners need a minimum of a 17.0 foot high tide to fish the pothole. No high tides reaching that level were scheduled for the normal peak of the chum return between July 17-23. The second "pothole" opening was allowed from July 24-27, but both of these openings produced little effort and the 2,600 chum salmon harvest was relatively minor (Table 13). The escapement of 5,500 was considered adequate, but was not exceptional (Tables 3 and 9).

Chum salmon began arriving in the Iniskin Bay subdistrict in late July. An aerial survey on July 21 indicated over 200 chums on the spawning ground with these numbers increasing to 1100 on July 27 and 2600 on July 30. The subdistrict was opened on August 1. Good fishing effort and weather conditions resulted in a harvest of approximately 16,000 chum salmon and with only 5,100 fish on

the spawning grounds, the subdistrict was closed on August 6. Escapement levels built quickly after the closure and the 10,000 fish escapement goal had been achieved by August 12. The subdistrict was reopened on August 15, but additional harvest in the area was minimal due to weather conditions that hindered fishing effort. The escapement of 12,000 chum salmon was considered excellent and the 21,400 harvest for the Iniskin Bay and Cottonwood Bay areas was comprised of 80 percent Iniskin Bay fish (Tables 3 and 13).

Good chum salmon returns were expected to both the Cottonwood Bay and Ursus Cove subdistricts based on the 1978 spawning escapements to these streams. Aerial surveys of these two areas indicated that the returns were not strong, but that harvestable numbers were available. Extreme caution is warranted when fishing Cottonwood Bay prior to achieving the escapement goal due to the shallow water, which causes fish to back out into the fishery on low tides. A short 18 hour opening was allowed in both subdistricts from 6:00 a.m. until 12:00 midnight August 16. The only daylight low tide during this opening was a large plus 6.0 foot holdover which kept most of the fish needed for spawning escapement inside of the closed fishing markers. No effort occurred in Ursus Cove and only 2,400 chums were harvested in Cottonwood Bay. Additional aerial surveys on August 19 indicated escapement goals to these two systems would be achieved and both areas were immediatley reopened at 1:00 p.m. August 19. The total Cottonwood Bay harvest was estimated at 3,500 fish and the

escapements to Ursus Cove and Cottonwood Bay streams were considered good (Tables 3, 9 and 13).

Coho Salmon

Increased interest on coho salmon has occurred in recent years, most probably due to the decreased prices for pink and chum salmon and the large 1982 coho harvest in the Kamishak district (Table 19). The majority of past coho salmon seine harvests have occurred in the Kamishak-Douglas subdistrict on returns to these major river systems. The harvest of cohos began during the first week of August when the subdistrict was reopened on August 1. Harvests built steadily with over 5,000 fish of the total coho salmon harvest of 7,138 being taken between August 15-19 (Table 1 and 19). The harvest was the second largest coho salmon harvest on record and was 3 1/2 times the 30 year average for this district (Table 19).

EASTERN DISTRICT

Sockeye Salmon

The Aialik Bay area has the only remaining harvestable sockeye salmon return in the Eastern district, since the shift of salmon production in Bear Lake from sockeye to coho salmon in the mid 1960's. The subdistrict was opened on June 30 after aerial surveys of the lagoon on June 29 indicated sockeye had begun arriving in the area. No fish had yet moved into the lake and extensive glacial water in the lagoon prohibited an accurate estimate of numbers of sockeye salmon present. An aerial survey on July 5 indicated over 1300 sockeye had reached the lake and another 4,000 plus fish were in the lagoon.

The lagoon was opened by flare for 15 minutes on July 7 and six boats caught just under 8,000 sockeye. The vessels could not stop the movement of sockeye into the lagoon and lake and the lagoon was reopened to fishing seven days per week on July 14 after an aerial survey the previous day indicated over 10,000 fish in the lake. Catches continued throughout the remainder of July and the final harvest of 25,900 sockeye salmon was a record for this subdistrict, surpassing by three times the previous record set in 1981 (Table 14). It was also the third highest sockeye harvest on record for the Eastern district ranking just

below the Bear Lake harvest years of 1968 and 1969 (Tables 1 and 20). The escapement of 20,000 sockeye was considerably above the goal of 2500-5000 fish (Table 4).

Pink and Chum Salmon

The Eastern district continues to be primarily an even-year pink salmon producing area with returns concentrated in Resurrection Bay. The first odd-year harvest of any significance since 1955 occurred in 1981 and with good escapements to intertidal spawning streams in Resurrection Bay that year, a limited harvest was anticipated again in 1983. Furthermore, the strong showing of chum salmon at Tonsina Creek the previous two years, good escapements in 1978 and 1979 and the good survival and return of pink salmon in 1980 and 1981, indicated a good return of chum salmon was possible this year.

The first aerial survey of Resurrection Bay was flown on July 18. Over 2,000 chum salmon were already in Tonsina Creek spawning and several schools were observed along beaches near the mouth. Pink salmon were beginning to school in both Thumb and Humpy Coves, but no fish had moved into either stream as yet. A short 12 hour opening from 6:00 a.m. until 6:00 p.m. July 21 was announced for only that portion of the Resurrection Bay subdistrict between the latitudes of Caines Head and Tonsina Creek. The Humpy Cove area was kept closed, as the minimal numbers of pinks present were only adequate for the recreational fishery at that location.

Eight boats participated during the first opening. The marker removal at the mouth of Tonsina Creek allowed chum salmon to be harvested and catches were 8,500 pink salmon and 2,800 chum salmon, with most of the pink salmon harvested in Thumb Cove.

Fish accumulated quickly during the closure and an aerial survey on July 26 indicated that the Tonsina Creek chum escapement had already exceeded 3,600 fish. More chum salmon were schooled off the mouth of Tonsina Creek and over 7,000 pink salmon were again schooled along beaches in Thumb Cove. A second 12 hour opening for the same portion of Resurrection Bay was allowed on July 28 and 10 boats caught an additional 10,600 pink and 3,000 chum salmon. A third opening was allowed on August 4 with markers temporarily adjusted at Thumb Cove to maximize the pink salmon harvest. The total harvest for these three openings was 27,000 pink salmon and 6,900 chum salmon (Tables 11 and 13). A discrepancy exists in the preliminary catch data on Table 11 and will be corrected during computer run editing. The chum salmon escapement to Tonsina Creek of 5,400 was considered excellent and pink salmon escapements to three intertidal streams in this area were considered excellent (Tables 2 and 3). It remains very obvious in this subdistrict that the strong even-year returns are produced by the upstream spawning systems of Bear, Salmon, Mayor and Clear Creeks, while the intertidal systems of Tonsina Creek, Thumb Cove and Humpy Cove produce good returns during both even and odd numbered years.

A fair pink salmon return occurred to several small streams in Aialik Bay with Aialik Lake Creek and Quicksand Cove being the primary producing systems. Over 9,000 pink salmon were harvested from this subdistrict with the majority of the harvest being taken in Aialik Lagoon during openings for sockeye in late July. The pink salmon escapement to Aialik Lake Creek was estimated at 3,000 fish.

SUSBISTENCE FISHERY

The salmon subsistence fishery in Kachemak Bay continues to exist in a somewhat confused state. The only area of Kachemak Bay recognized by the Board of Fisheries to be a "true" subsistence fishery deserving of the top priority ranking for resource use is the Port Graham and English Bay area. The remainder of the bay is considered by the Board to be a personal use salmon area. However, during 1983, the Department continued to regulate the late August coho fishery as a subsistence fishery as directed by a court decision by Superior Court Judge Paul Jones.

English Bay--Port Graham

The Board of Fisheries has recognized the communities of Port Graham and English Bay as being true subsistence communities and deserving the subsistence priority. Two salmon subsistence seasons have been established: (1) May 10- June 15 and (2) August 16-September 30.

Catch calendars were issued by the Subsistence Division in prior years to determine the total harvest and use of salmon by residents of these villages. Catches, however, were for all types of gear and throughout the entire summer and did not reflect just the harvests made using set gillnets during the two previously mentioned seasons. In 1983 the Commercial Fisheries Division was

given the responsibility of issuing and collecting the permits, and catches recorded on the calendars are for gillnet caught salmon only and do not represent additional salmon taken with sport gear or taken from commercial fishing nets.

Harvests for both villages appeared to be adequate and no adverse comments were received as in the past concerning subsistence harvests being too low. Catches for the villages presented in Tables 23 and 24 indicate reductions in numbers for both villages primarily in pink and coho salmon. The sharp drop in coho harvest for the village of English Bay is believed to be the result of not including the sport harvests on the calendars and the lower pink salmon harvests by both villages is merely a reflection of natural run strength fluctuations from year to year.

A meeting was held with representatives of both villages and the advisory committee in early fall of 1982 to discuss management options concerning complaints by some residents that they could not get adequate numbers of salmon for their subsistence uses. These complaints have all come from English Bay during the previous two years and appear to address the sockeye fishery from May 10-June 15. The primary complaint was that when commercial set gillnets began fishing the first Monday of June that there were no beach fishing sites available for subsistence fishermen that did not have commercial set gillnet permits.

The subsistence priority law was reemphasized to the people and that if complaints were received from anyone in the villages that they did not get an adequate number of fish, that the Department would have to close the commercial set net fishery. To avoid punishing people from one village because the other village had not received adequate numbers of fish, all parties agreed that the Port Graham subdistrict would be divided into two sections. The rock outcropping known locally as "the ladder" (Figure 7) basically separates, as close as possible, Port Graham fishermen from English Bay fishermen. The area west of "the ladder" would be the English Bay section and the area east of "the ladder" would be the Port Graham section. Thus, depending on who needed additional subsistence fish, one section could be closed to commercial set gillnet fishing to allow additional subsistence harvest while the other would be left open to commercial fishing. No complaints about inadequate numbers of fish for subsistence use were received during the year.

Kachemak Bay

The late August coho salmon fishery in Kachemak Bay was conducted as a subsistence fishery in 1983 as directed by the State Superior Court decision. The season was open from August 16 until October 1. A total of 343 permits were issued, a decrease of 13 percent from the previous year (Tables 21 and 22). The primary areas which have had decreasing numbers of permits issued in recent years continue to be Anchorage and the Kenai-Soldotna

area. This trend appears to reflect the personal use gillnet openings which have been allowed along the eastside of Upper Cook Inlet in recent years (Table 21). The total harvest of 2,922 fish is the lowest since 1975 and reflects the poor pink and coho salmon returns that occurred this year (Table 22). The pink salmon harvest was half of the average and the coho harvest, while 10 percent above average, was the lowest harvest since 1979. Coho escapement to the Fox River drainage was thought to be poor and below levels needed to perpetuate the run. This may become evident in the 1987 returns and may require fishery closures to achieve adequate spawning escapement.

China Poot Dip Net Fishery

A strong return of sockeye salmon was expected to China Poot Bay (Leisure Lake) in 1983 and eventually surpassed even the wildest expectations. The personal use dip net fishery was scheduled to be open July 1-31 in the regulation book in anticipation of this return and markers designating saltwater limits for sport fishing were moved further towards the creek mouth. No permits were required to participate in the dipnet fishery in 1983 and fishing effort and harvest was only sporadically monitored by FRED division personnel. Harvests were estimated at 5,910 dipnet caught sockeye and 480 sockeye caught on rod and reel. Total anglers and dipnetters visiting the stream was estimated at 1,820 fishermen with over 30 boats and 100 fishermen observed during a single high tide (Dudiak, 1983).

ENHANCEMENT AND REHABILITATION

Numerous salmon enhancement and rehabilitation projects have been conducted in Lower Cook Inlet with varying degrees of success in recent years and many more are presently in various stages of planning. The Lower Cook Inlet area lends itself to such projects because of the many small bays and lagoons where salmon returns from these projects will segregate from other returns and can be more accurately assessed and managed.

Tutka Hatchery

The Tutka Hatchery released 11.0 million reared pink salmon fry, 3.7 million direct release pink salmon fry and 1.2 million reared chum salmon fry in Tutka Bay or Lagoon and an additional 0.5 million pink salmon fry were transported and released in Paint River in the Kamishak district. The 1983 egg take reached the highest level to date by taking over 25 million pink and 158,400 chum salmon eggs. The hatchery capacity has been increased to 30 million eggs, but adult brood stock mortalities in the lagoon holding pens prevented this level from being reached this year.

The 1983 pink salmon return of 666,517 was the second highest on record and contributed 64 percent of the total Lower Inlet harvest of 927,451. This year's pink salmon return was the first

odd-year return that approached the lower end of the forecasted return. Past survival rates of fry have averaged 7.5 percent for reared and 3.8 percent for direct release fry. The 1983 survival rates were estimated at 4.4 percent for reared fry and 3.9 percent for direct released fry. Natural fry survival has always been very close to the survival rate for direct released hatchery fry, but in 1983 natural fry survived at only 2.3 percent or roughly 40 percent lower than the hatchery fry. Furthermore, reared and direct release survival rates were very similar in 1983, where in the past, there has existed almost a 2:1 difference (Dudiak, 1983).

Leisure Lake

The total sockeye salmon return to China Foot Bay from the Leisure Lake stocking project was just over 91,000 fish. The commercial seine fishery caught approximately 84,600 sockeye with dipnetters and sportfishermen harvesting an additional 6,400 fish. The total return represents over 37 percent survival from smolt to adult.

Fry stocking levels were increased again in 1983 from 1.5 million in 1982 to 2.1 million. Smolt outmigration estimates began to show a significant shift in ages of smolt from 100 percent age I smolt in 1981, to 98.6 percent age I and 1.4 percent age II in 1982 to 78.3 percent age I and 21.7 percent age II in 1983.

Average lengths of age I smolt have decreased from 96.9 mm to 66.0 mm over the last three years and average weights have decreased from 8.0 grams to 2.2 grams during the same period of time. Whether or not the high ocean survival rates from smolt to adult will continue in the future, remains top be seen (Dudiak, 1983).

Halibut Cove

Completion of the Anchorage hatchery complex allowed king salmon smolt to be available for the Halibut Cove Lagoon saltwater release. A total of 201,000 smolt were released in May with approximately 10 percent marked and coded-wire-tagged. The 1983 adult king salmon return of 3,080 fish was the highest on record. Approximately 3,000 anglers visited the lagoon in 1,000 boats from late May through mid July and caught just under 2,200 kings. This return brought the overall survival rate for the 1979 smolt release to 1.9 percent. Commercial set gillnets located near the lagoon harvested an additional 650 fish and provided a sizeable increase to their annual income (Dudiak, 1983).

Scurvey Creek

A counting weir was operated on Scurvey Creek for the second year in a row to enumerate returns of pink salmon to this stream from a project begun in 1980. The final escapement estimate was only 500 pink salmon which is probably more an indication of the

flooding and ocean survivals experienced this year than the true success of the project.

Paint River

Pink salmon fry were transplanted into Paint River from the Tutka Hatchery for the fourth year in a row. A total of 502,000 were released in 1983. No adult pink salmon were observed at the mouth of Paint River in 1983. The system continues to be studied although no funds have been appropriated to date to construct the fish passes needed before serious efforts can begin to start salmon returns to this tremendous river system.

Chenik Lake

This year marked the fourth year of increasing returns and escapements to Chenik Lake. Sockeye fry from the Crooked Creek Hatchery were stocked in the lake in 1977, 1978 and 1980 and appear to be one of the reasons behind the increased returns. Although none of the 256,000 fry which were released in 1978 were marked, samples taken from the 1983 return indicated 51.6 percent of the fish were five year old sockeye salmon and could have been produced by the 1978 stocking.

The first harvest since the 1940's was allowed at Chenik Lake and 2,800 sockeye were harvested. The escapement to the lake was estimated at 11,000 and was the best recorded escapement since

the mid 1930's. If this trend continues, 1984 and 1985 returns from the 1980 stocking of one million fry should produce excellent returns.

Spring Creek

No decisions have been made regarding the salmon mitigation measures for the 4th of July Creek facility in Resurrection Bay. Several options are being researched at the present time to determine the potential for "off-site" mitigation.

Miscellaneous

No coho releases occurred at Fritz Creek near the Homer Spit in 1983. Construction at the Anchorage Hatchery complex resulted in a shortage of smolt available for certain projects.

Many other projects are being researched in Lower Cook Inlet at the present time. Homer Spit king salmon smolt releases, Caribou and Seldovia Lake coho fry plants, Gore Point Lake clearance and lake stocking and Delight and Desire Lake fertilization are a few of the projects being explored. Bear Lake in Seward was fertilized for the third year in a row to increase coho growth and survival. Sockeye fry appear to be doing much better than the coho in Bear Lake and increased sockeye returns may result in commercial harvests in the near future. The PNP hatchery planned for Tonsina Bay has been denied because of its location in the

Kachemak Bay State Wilderness Park and a new location at Chugach Bay is presently being considered.

LITERATURE CITED

Alaska Department of Fish and Game, Alaska Catch and Production, Commercial Fisheries Statistics. Statistical Leaflets, 1962-1970.

Alaska Department of Fish and Game, Division of Commercial Fisheries, Unpublished Records, 1954-1983.

Alaska Department of Fish and Game. IBM Computer Catch Summaries, 1954-1983.

Commercial Fisheries Entry Commission. License Statistics. Unpublished Data, 1974-1983.

Dudiak, Nick. 1983. 1983 Progress Reports for Lower Cook Inlet Area Projects. Alaska Department of Fish and Game, FRED Division, Unpublished Report. 113pp.

Schroeder, Thomas R. 1984. Lower Cook Inlet Sockeye and Chum Salmon Age, Weight and Length Statistics, 1970-1983. ADF&G Tech. Data Report No. 124. 45pp.

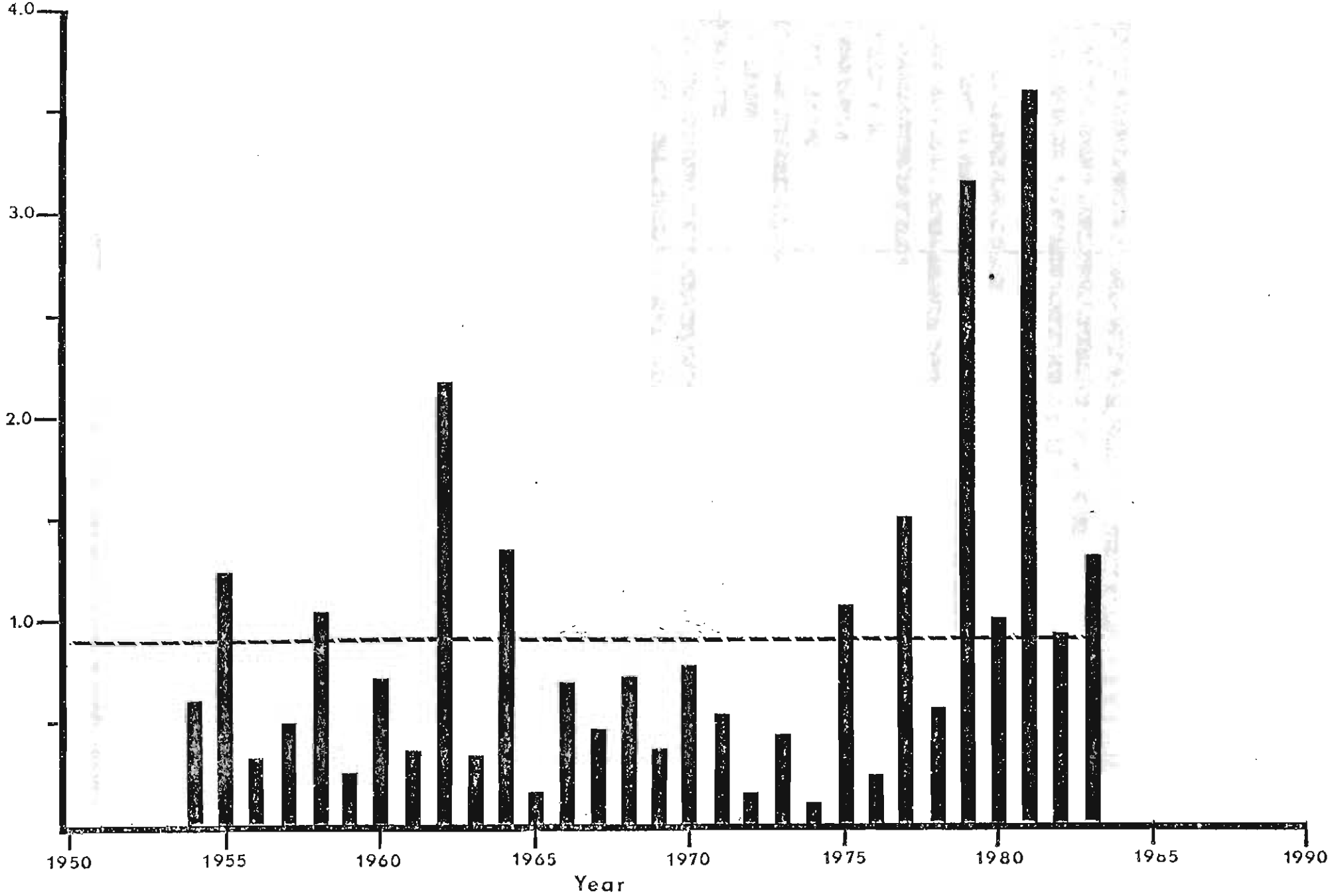


Figure 8. Lower Cook Inlet total salmon catch, 1954-1983.

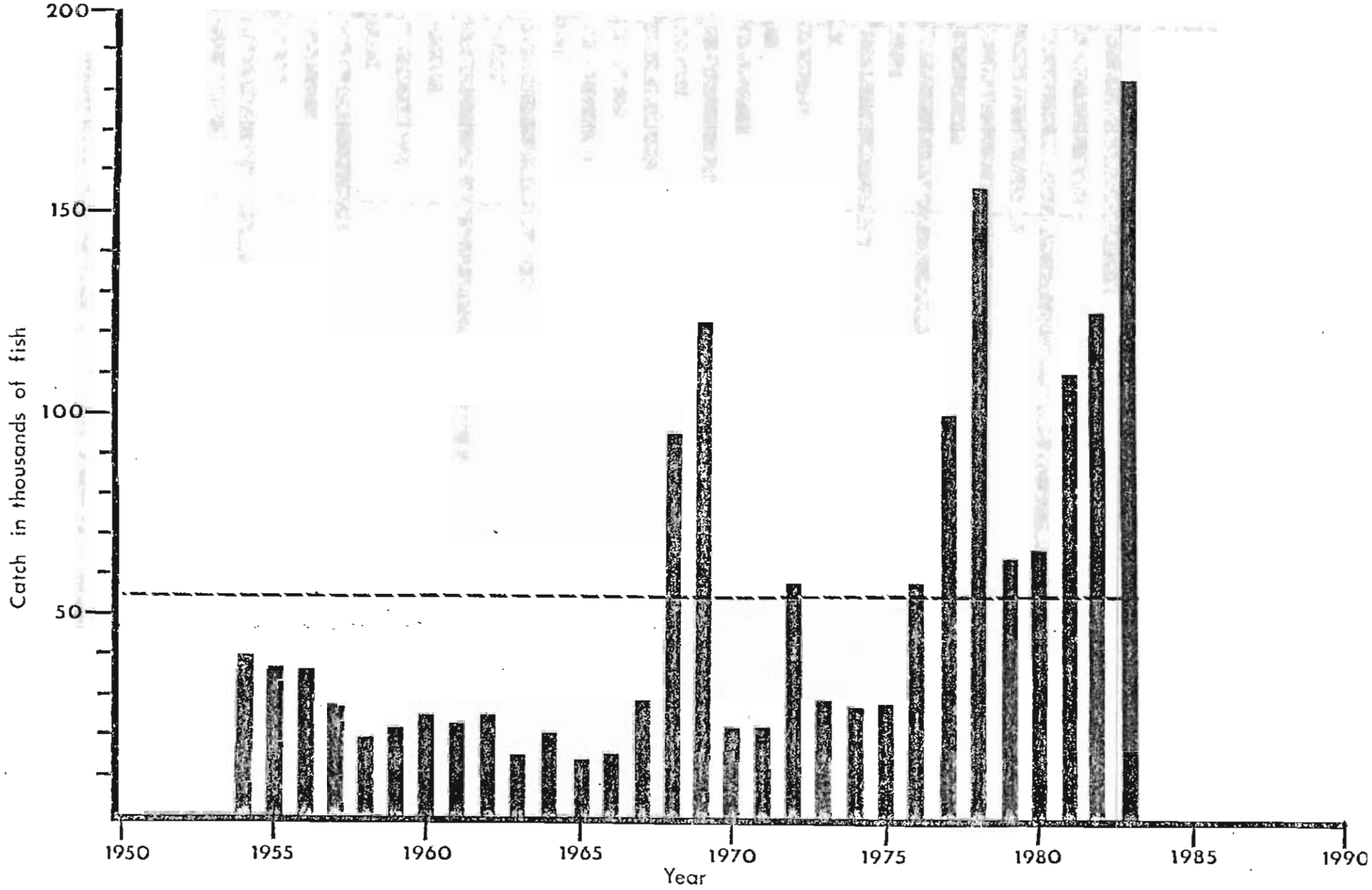


Figure [illegible]. [illegible] Inl[illegible] soc[illegible]e sa[illegible]n c[illegible], 1[illegible]

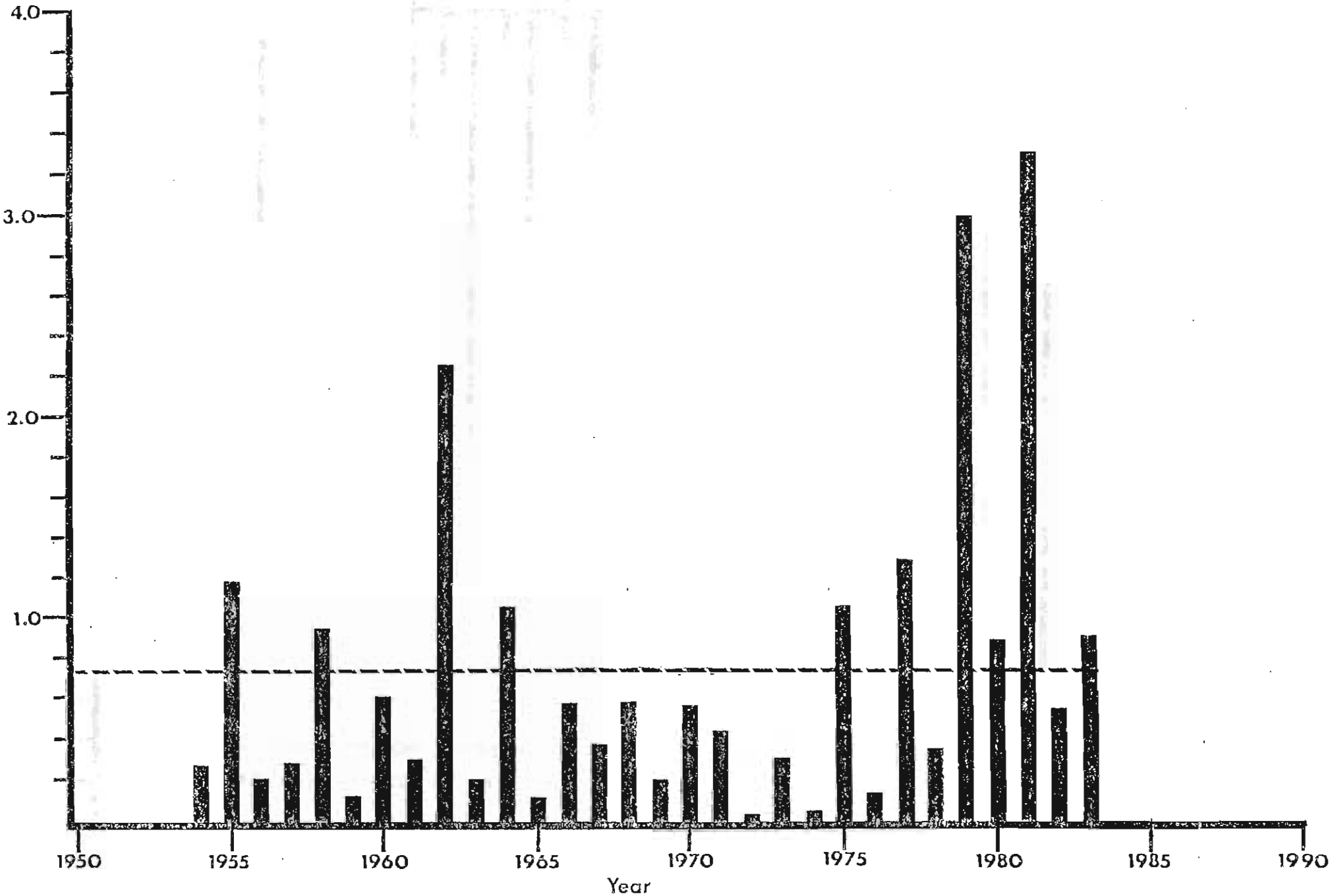
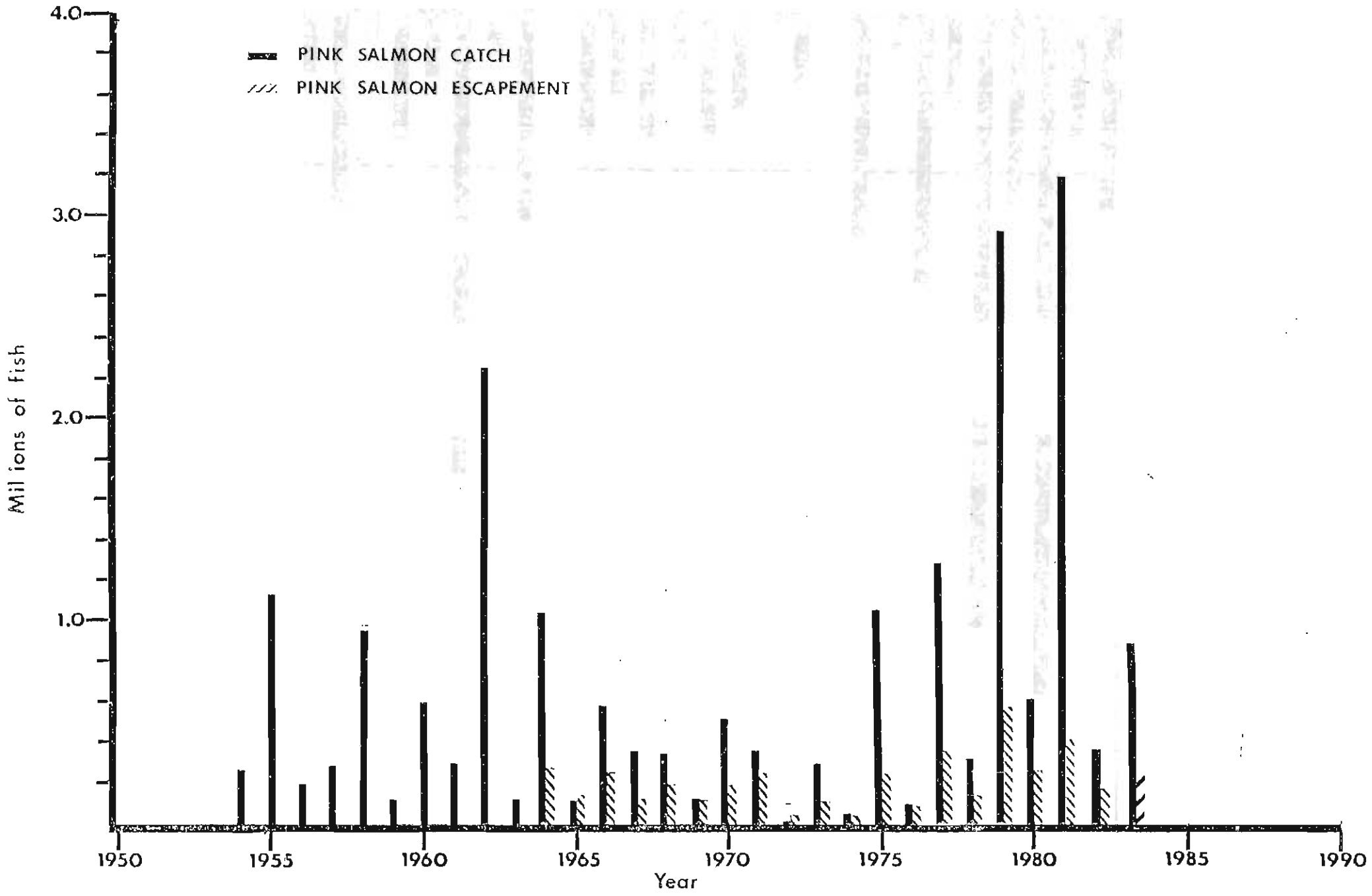


Figure 10. Lower Cook Inlet pink salmon catch, 1954-1983.



ure [illegible] herhead [illegible] r District [illegible] oin [illegible] lmo [illegible] atch [illegible] cap [illegible] t, [illegible] 4 -

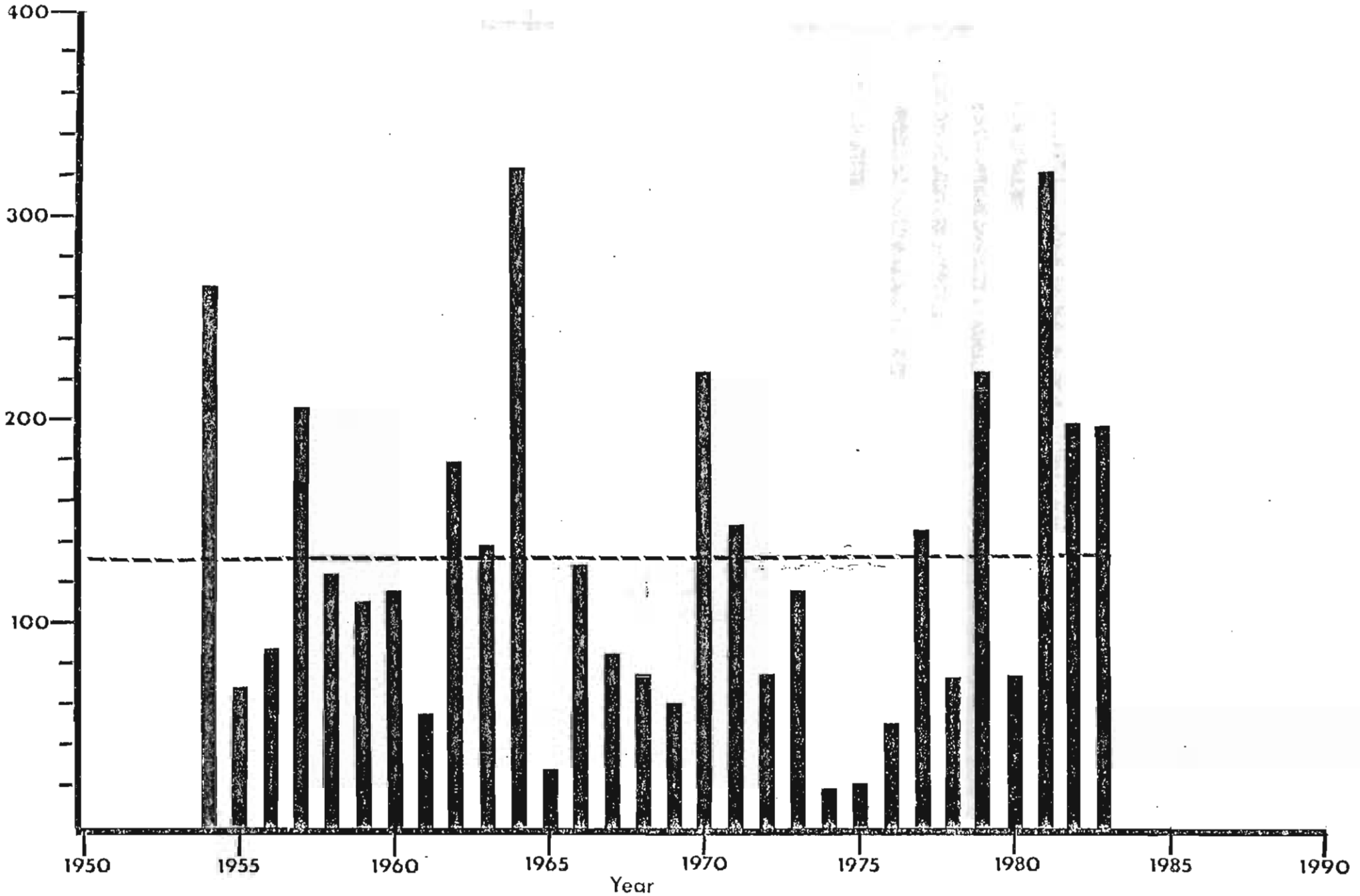


Figure 12. Lower Cook Inlet chum salmon catch, 1954 -1983.

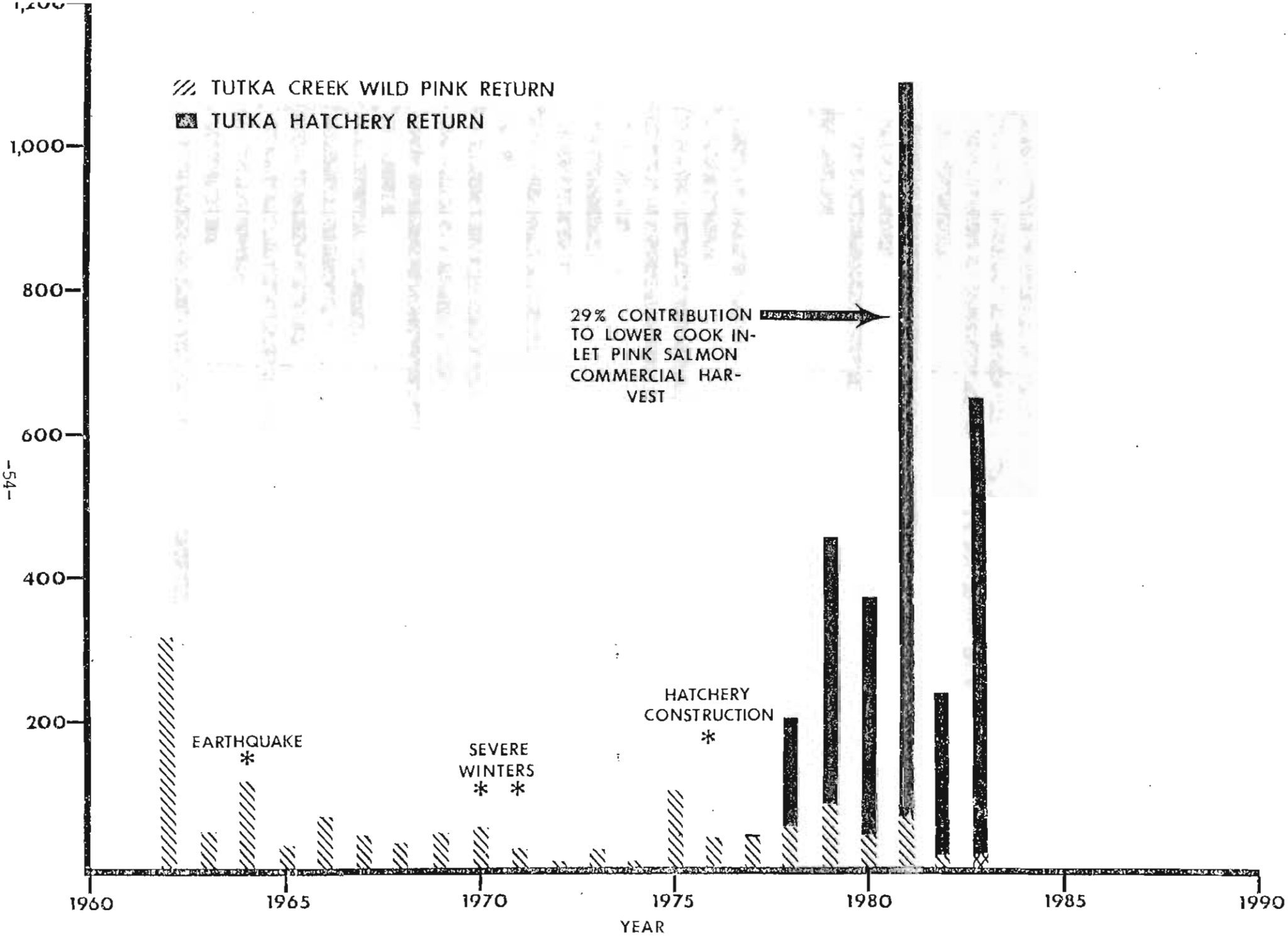


Figure 13. Tutka Creek wild pink salmon returns with recent years' hatchery contribution.

Table 1. Lower Cook Inlet salmon catch by species, district and gear, 1983.1/

	KING	SOCKEYE	COHO	PINK	CHUM	TOTAL
SOUTHERN DISTRICT						
Set Net	822	41,707	1,955	20,377	4,377	69,238
Seine	36	88,960	1,634	669,721	9,904	770,255
TOTAL	858	130,667	3,589	690,098	14,281	839,439
OUTER DISTRICT	14	16,835	54	199,794	27,203	243,900
KAMISHAK DISTRICT	1	11,207	7,138	1,405	142,901	162,652
EASTERN DISTRICT	0	25,932	1	36,154	7,934	70,021
TOTAL	873	184,641	10,782	927,451	192,319	1,316,066
30 Year Average	388	54,299	7,383	737,786	131,889	931,745

1/ Preliminary data.

Table 2. Lower Cook Inlet escapement goals, average observed, and 1983 escapements of pink salmon.

SOUTHERN DISTRICT	ESC. GOAL	AVE. ESC. 1/	1983 ESC.
Humpy Creek	25,000 - 50,000	50,000	104,800
Tutka Lagoon	6,000 - 10,000	12,000	12,900
Seldovia Creek	25,000 - 35,000	40,000	27,900
Port Graham River	20,000 - 40,000	15,000	4,600
China Poot Bay	5,000	9,000	14,100
Barabara Creek	18,000 - 24,000	5,000	14,800
Total	99,000 - 164,000	131,000	179,100
OUTER DISTRICT			
Rocky River	50,000	21,000	16,100
Windy Left River	30,000 - 50,000	17,000	11,900
Windy Right River	10,000	5,000	4,300
Port Dick Creek	20,000 - 100,000	47,000	64,100
Island Creek	12,000 - 18,000	4,000	15,300
South Nuka Creek	10,000	13,000	22,200
Port Chatham Streams	10,000 - 15,000	10,000	3,500
Total	142,000 - 253,000	117,000	137,400
KAMISHAK DISTRICT			
Big Kamishak River	20,000	31,000	0
Little Kamishak River	20,000	22,000	0
Amakdedori Creek	5,000	16,000	200
Bruin Bay River	25,000 - 50,000	74,000	4,000
Sunday Creek	10,000	11,000	4,700
Brown's Peak Creek	10,000	10,000	1,700
Total	90,000 - 115,000	164,000	10,600
EASTERN DISTRICT 2/			
Bear Creek	5,000	9,800	800
Salmon Creek	10,000	16,100	500
Mayor Creek	2,000	3,000	0
Clear Creek	2,000	1,300	0
Thumb Cove	1,000	3,300	4,900
Humpy Cove	2,000	3,000	2,000
Tonsina Creek 3/	5,000	3,900	5,400
Total	27,000	41,000	13,600
LOWER COOK INLET TOTAL	358,000 - 559,000	453,000	340,700

1/ Average escapement figures are based on weir counts, ground and aerial surveys conducted between 1951 and 1982. For many streams only several years data exist.
2/ Average escapements for pinks are for even years only.
3/ Pink escapement estimates are minimum figures due to glacial water and flooding that occur in late August and September.

Table 3. Lower Cook Inlet escapement goals, average observed and 1983 escapements for chum salmon. 1/

OUTER DISTRICT	ESCAPEMENT GOAL (RANGE)	AVE. OBS. ESCAPE.	1983 ESCAPE.
Dogfish Lagoon	5,000 - 10,000	6,000	5,300
Port Chatham (streams)	*	1,500	900
Windy Right River	*	1,500	200
Windy Left River	*	1,300	0
Rocky River	20,000	9,000	4,000
Head End Creek	4,000	6,400	4,500
Island Creek	10,000 - 15,000	8,000	36,200
Middle Creek	*	2,000	200
Petrof River	2,000 - 5,000	3,000	1,800
Total	41,000 - 54,000	38,700	53,100
KAMISHAK DISTRICT			
Silver Beach (streams)	*	4,000	2,000
Main Left (streams)	5,000 - 10,000	6,000	2,200
Big Kamishak River	20,000	13,000	25,000
Little Kamishak River	20,000	9,000	25,000
McNeil River	10,000 - 20,000	26,000	48,000
Cottonwood Creek	10,000	7,500	8,300
Iniskin River	10,000	16,000	12,000
Bruin River	5,000	7,000	5,500
Rocky Cove (Sunday Creek)	*	1,000	1,000
Ursus Cove (streams)	5,000 - 10,000	4,000	7,700
Total	85,000 - 110,000	93,500	136,600
SOUTHERN DISTRICT			
Tutka Creek	*	1,100	500
Seldovia River	*	1,200	500
Port Graham River	4,000 - 8,000	1,800	1,900
Total	4,000 - 8,000	4,100	2,900
LOWER COOK INLET TOTAL	130,000 - 172,000	135,200	192,700

1/ Average escapement figures are based on weir counts and ground and aerial surveys conducted between 1951 and 1983. For many streams, only several years of data exist.

*No established goal.

Table 4. Lower Cook Inlet escapement goals, average observed and 1983 escapements for sockeye salmon.

	Escapement Goal	Average Escape.	1983 Escape.
SOUTHERN DISTRICT			
English Bay	10,000 - 20,000	7,200	12,000
Clearwater Slough	*	-	600
Total	10,000 - 20,000	7,200	12,600
OUTER DISTRICT			
Desire Lake	10,000	7,800	12,000
Delight Lake	10,000	6,400	7,000
Anderson Beach	2,000	500	500
Total	22,000	14,700	19,500
EASTERN DISTRICT			
Aialik Lake	2,500 - 5,000	7,000	20,000
Bear Lake	*	*	*
Total	2,500 - 5,000	7,000	20,000
KAMISHAK DISTRICT			
Mikfik Lake	5,000	5,700	7,000
Chenik Lake	10,000 - 20,000	1,400	11,000
Kamishak River	*	2,500	5,000
Douglas River	*	1,500	500
Douglas Beach	*	500	400
Total	15,000 - 25,000	11,600	23,900
LOWER COOK INLET TOTAL	49,500 - 72,000	40,500	76,000

*Data not available.

Table 5. Emergency order commercial fishing periods in Lower Cook Inlet, 1983.

Number	Date	Description
2H-011-83	June 9	Opens Bruin Bay, McNeil River and Kamishak-Douglas subdistricts seven days per week at 12:00 noon Thursday June 9.
2H-012-83	June 15	Opens McNeil River Lagoon at 10:00 a.m. Wednesday June 15 until further notice.
2H-013-83	June 21	Closes McNeil River Lagoon and puts the McNeil River and Kamishak-Douglas subdistricts back on the regular two-48 hour weekly fishing periods at 6:00 a.m. Wednesday June 22. Also, allows fishing up to the mouth of Amakdedori Creek at 6:00 p.m. Tuesday June 21 and keeps the Bruin Bay subdistrict on seven day per week fishing.
2H-014-83	June 23	Opens the Tutka Bay subdistrict and the China Poot section of the Humpy Creek subdistrict at 6:00 a.m. Monday June 27 and moves the markers in China Poot to the mouth of the creek.
2H-017-83	June 24	Opens the East Nuka subdistrict at 6:00 a.m. Monday June 27 and closes set gill net fishing in the Port Graham subdistrict from 6:00 a.m. Monday June 27 until 6:00 a.m. Wednesday June 29.
2H-018-83	June 29	Opens Aialik Bay and Dogfish Bay subdistricts at 6:00 a.m. Thursday June 30.
2H-019-83	July 1	Removes markers at Desire Lake at 12:00 noon Friday July 1.
2H-020-83	July 5	Closes the McNeil River subdistrict at 6:00 a.m. Wednesday July 6.

Table 5. (Continued)

Number	Date	Description
2H-021-83	July 6	Opens Seldovia Bay and waters of the Port Dick subdistrict southeast of a line from the marker on the northeast corner of Middle Creek to the southeast corner of Shelter Cove at 6:00 a.m. Thursday July 7.
2H-022-83	July 6	Removes the markers at Delight Lake at 6:00 a.m. Thursday July 7 and allows a 15 minute opening by flare in Aialik Lagoon at approximately 9:00 a.m. Thursday July 7.
2H-024-83	July 11	Reopens the McNeil River subdistrict at 6:00 a.m. Tuesday July 12, opens the "pothole" in Bruin Bay River from 12:00 noon Monday July 11 until 6:00 p.m. Friday July 15 and opens the Chenik River closed area by flare for 15 minutes at 3:00 p.m. Monday July 11.
2H-025-83	July 13	Opens Aialik Lagoon to fishing seven days per week at 6:00 a.m. Thursday July 14 and adjusts the markers at Island Creek in Port Dick Bay at 6:00 a.m. Thursday July 14.
2H-026-83	July 14	Opens Tutka Lagoon by flare for one hour from 4:30 until 5:30 a.m. Friday July 15.
2H-028-83	July 16	Opens the Southern and Outer districts for 48 hours from 6:00 a.m. Monday July 18 until 6:00 a.m. Wednesday July 20 and keeps a two mile radius closure around Petrof River.
2H-030-083	July 19	Allows fishing in the McNeil River subdistrict seven days per week effective at 12:00 noon Tuesday July 19.
2H-031-83	July 20	Opens the Southern District at 6:00 a.m. Thursday July 21 until further notice and opens the Outer district except for Dogfish, Windy and Rocky Bays subdistricts for 48 hours from 6:00 a.m. Thursday July 21 until 6:00 a.m. Saturday July 23.

Table 5. (Continued)

Number	Date	Description
2H-032-83	July 20	Opens Tutka Lagoon by flare for two hours from 6:00 until 8:00 a.m. Thursday July 21, opens that portion of the Resurrection Bay subdistrict between the latitudes of Tonsina Creek and Caines Head for 12 hours from 6:00 a.m. until 6:00 p.m. Thursday July 21 and removes the markers at Tonsina Creek.
2H-033-83	July 23	Closes the Kamishak-Douglas subdistrict at 3:00 p.m. Saturday July 24, opens the Bruin Bay "pothole" from 3:00 p.m. Saturday July 24 until 6:00 a.m. Wednesday July 27 and puts the Bruin Bay and McNeil River subdistricts back on the regular two-48 hour weekly periods effective at 6:00 a.m. Wednesday July 27.
2H-034-83	July 23	Opens the Outer district east of and including Port Dick for 48 hours from 6:00 a.m. Monday July 25 until 6:00 a.m. Wednesday July 27.
2H-035-83	July 25	Opens Tutka Lagoon by flare for one hour from 1:30 until 2:30 p.m. and moves markers in Seldovia Bay for two hours by flare from 1:00 until 3:00 p.m. Monday July 25.
2H-036-83	July 26	Opens Resurrection Bay between the latitudes of Tonsina Creek and Caines Head for 12 hours from 6:00 a.m. until 6:00 p.m. Thursday July 28, closes Aialik Lagoon and puts the Aialik Bay subdistrict back on the standard two-48 hour weekly fishing periods effective at 6:00 a.m. Wednesday July 27 and removes the markers at Tonsina Creek.
2H-037-83	July 26	Closes the Port Graham subdistrict and the entire Outer district except for the East Nuka and Nuka Island subdistricts at 6:00 a.m. Wednesday July 27 and puts the markers at Desire Lake back in effect.

Table 5. (Continued)

Number	Date	Description
2H-038-83	July 28	Reopens the Port Dick subdistrict and puts the markers on the southern arm of China Poot Bay back to the HEA powerline effective at 6:00 a.m. Monday August 1.
2H-039-83	JULY 30	Opens the Kamishak-Douglas and Iniskin Bay subdistricts at 6:00 a.m. Monday August 1.
2H-040-83	August 1	Opens Tutka Lagoon by flare for 30 minutes from 6:30 until 7:00 p.m. Monday August 1.
2H-041-83	July 27	Adjusts markers at South Nuka Island Creek for 2 1/2 hours from 9:30 until 12:00 noon Thursday July 28.
2H-042-83	July 30	Opens the Resurrection Bay subdistrict between the latitudes of Tonsina Creek and Caines Head for 12 hours from 6:00 a.m. until 6:00 p.m. Thursday August 4. The markers at Tonsina Creek will not be in effect and the markers at Thumb Cove will be adjusted at approximately 9:00 a.m. Thursday August4.
2H-043-83	August 3	Closes the Northshore subdistrict and the China Poot Bay section of the Humpy Creek subdistrict at 6:00 a.m. Thursday August 4.
2H-044-83	August 3	Adjusts markers at South Nuka Island Creek for six hours from 9:00 a.m. until 3:00 p.m. Thursday August 4.
2H-045-83	August 5	Closes the entire Outer and Eastern districts and the Tutka Bay, Bruin Bay and Iniskin Bay subdistricts at 6:00 a.m. Saturday August 6.

Table 5. (Continued)

Number	Date	Description
2H-046-83	August 11	Reopens the Fort Dick subdistrict for 24 hours from 12:00 noon Friday August 12 until 12:00 noon Saturday August 13 and then at 6:00 a.m. Monday August 15 until further notice. The markers will be adjusted at Island Creek at 12:00 noon Friday August 12.
2H-050-83	August 15	Opens the Iniskin Bay subdistrict at 12:00 noon Monday August 15, opens Ursus Cove and Cottonwood Bay for 18 hours from 6:00 a.m. until 12:00 midnight Tuesday August 16 and keeps a 1/2 mile radius closure around the mouth of Brown's Peak Creek. It also closes the Port Dick subdistrict at 6:00 a.m. Wednesday August 17.
2H-051-83	August 19	Reopens Ursus Cove and Cottonwood Bay subdistricts at 1:00 p.m. Friday August 19.
2H-052-83	Sept. 26	Closes the Kachemak Bay subsistence fishery at 6:00 a.m. Saturday October 1.

Table 6. Preliminary Estimate of Adult Pink Salmon return to Tutka Bay and Lagoon, 1983.

Commercial Harvest:	
Seine	603,822
Set Net	11,609
Sub-Total	615,431
Sport Catch	5,000
Escapement:	
Tutka Creek and Channel	12,900
Egg-Take	53,800
Total Return	687,131

Tutka Lagoon Hatchery contribution estimated at 666,517 or 97% of the total run.

Table 7. Tutka Bay (241-16) Pink Salmon Seine Catch by Statistical Week.

Week	1978 Entire Subdistrict	1978 Lagoon Only	1979 Entire Subdistrict	1979 Lagoon Only	1980 Entire Subdistrict	1980 Lagoon Only	1981 1/ Entire Subdistrict	1981 1/ Lagoon Only
25								
26			3,786		3,691		8,612	
27			129,659		17,630		101,301	
28	24,683		178,178	68,500	76,810		243,100	
29	19,077		50,873	24,000	130,608	35,074	301,530	42,000
30	83,681	47,143	22,574	20,700	34,669		164,094	35,000
31	19,980	17,143	15,392	14,500	22,014	20,500	100,163	12,000
32	12,357	11,100			22,755	21,481	40,911	10,000
33	818						16,966	13,700
34							7,543	7,243
Total Seine Catch	160,596	75,386	400,462	127,700	308,177	77,055	984,670	119,943
Set Net Catch	7,266		21,354		13,336		39,729	
Sport Catch	---		2,000		5,000		6,000	
Egg Take	21,100		21,200		26,897		22,000	
Escapement	15,000		10,600		17,300		28,000	
Total Return	203,962		455,616		370,710		1,080,399	

1/ Preliminary data only.

Table 7. (continued)

1982 1/		1983 1/	
Entire Subdistrict	Lagoon Only	Entire Subdistrict	Lagoon Only
50			
300			
4,349		19,704	
44,283	8,500	102,803	
41,564		236,570	35,000
31,700		157,311	35,000
35,791	24,000	61,419	18,000
4,063		26,015	10,000
11,000	11,000		
173,100	57,100	603,822	98,000
8,000		11,609	
2,000		5,000	
41,200		53,800	
18,500		12,900	
242,800		687,131	

Table 8. Estimated Pink Salmon Escapements in Thousands of Fish for the Nine Index Streams in the Souther and Outer Districts of Cook Inlet. 1/

YEAR	HUMPY	TUTKA 3/	SELDOVIA	PORT GRAHAM	WINDY LEFT 6/	WINDY RIGHT	ROCKY 8/	PORT DICK 6/	ISLAND CREEK	TOTAL
1964	18.5 2/	20.0	60.0	16.0	7.7	6.2	80.0	31.5	30.0	269.9
1965	28.0	20.0	30.0	1.5	10.0	2.0	.3	50.0	.5	142.3
1966	30.0	12.0	86.0	24.0	7.0	7.0	44.0	35.0	7.0	252.0
1967	25.0	7.0	55.0	2.0	6.0	6.0	1.0	20.0	.5	122.5
1968	24.7	7.9	53.2	24.4	6.9	2.8	43.1	29.0	4.3	196.3
1969	5.4	6.5	60.0	4.0	23.0	3.2	1.0	12.0	.1	115.2
1970	55.2	6.5	23.0	16.6	13.0	2.1	32.0	34.5	5.5	188.4
1971	45.0	16.7	31.1	13.2	35.4	13.0	1.6	97.8 2/	.1	253.9
1972	13.8	1.5	5.8	2.4	.4	.1	8.2	10.0 2/	1.7	43.9
1973	36.9	6.5	14.5	7.0	12.9	4.6	2.0	26.4 2/	.5	111.3
1974	17.4	2.6	13.7	2.8	.1	.1	1.5	1.5 2/	.5	40.2
1975	64.0	17.6	36.2	27.3	18.7	9.7	4.4	62.8 2/	.1	240.8
1976	27.2	11.5	25.6	6.5	0.2	0.2	2.7	12.7	0.0	86.6
1977	86.0	14.0	35.7 4/	20.6 4/	47.3	11.1	36.7	109.3	0.6	361.3
1978	46.1	15.0	24.6	6.7	1.1	0.3	8.2	44.9	0.4	147.3
1979	200.0	10.6	43.8	32.7	74.8	10.4	85.5 4/	116.9	0.5	574.7
1980	64.4	17.3	65.5	40.2	10.9	3.3	6.4 4/	56.1 7/	2.2	266.3
1981	115.0	21.1	62.7	18.4	31.3	4.7	25.0	106.0	25.0	409.2
1982	31.9	18.5	38.4	28.9	4.4	4.7	6.6	19.9	15.0	168.3
1983	104.8	12.9	27.9	4.6	11.9	4.3	16.1	64.1	15.3	261.9
Total	1039.3	245.7	792.7	299.8	323.0	95.8	405.8	937.4	109.8	4,249.3
Average Escape.	52.0	12.3	39.6	15.0	16.2	4.8	20.3	46.9	5.5	212.5
Range	22.5-30	4.5-7 5/	24-30	20-40	7.5-10	7.5-10	37.5-50	22.5-30	10-15	156-222 even yr. and 221-317 odd yr.

1/ Escapement estimate derived from peak counts or calculated from counts made throughout the spawning season. When series counts were available, the total fish/days was divided by average stream life (2.5 weeks) to estimate total escapement.

2/ Weir counts.

3/ Does not contain F.R.E.D. egg facility pink salmon adult harvests of 3,400 in 1975; 10,814 in 1976; 6,528 in 1977; 21,100 in 1978; 21,200 in 1979; 26,897 in 1980; 20,606 in 1981; 32,000 in 1982 and 53,800 in 1983.

4/ Due to flooding, expanded aerial survey counts were used to fill vacancies in ground counts.

5/ An additional 20,000 adults are needed for hatchery egg-take requirements.

6/ Escapement ranges have been increased to 25-35,000 for Windy Left and 70-100,000 in Port Dick in years where large numbers of upstream spawners return.

7/ 3,000 pinks transplanted in Scurvey Creek in 1980.

8/ 50 and 1,000 chums transplanted in Scurvey Creek in 1980 and 1981, respectively, along with 3,600 pinks in 1981.

Table 9. Estimated Chum Salmon Escapements in Thousands of Fish in the Major Spawning Systems in Lower Cook Inlet. 1/

Year	Port Graham	Dogfish Lagoon	Rocky River	Pt.Dick Head	Island Creek	Big Kamishak	Little Kamishak	McNeil River	Bruin Bay	Ursus Cove	Cottonwood Creek	Iniskin Bay	Total
1964	1.0	12.0	5.0	8.0	8.0	25.0	*	90.0	*	*	*	11.0	160.0
1965	*	3.5	*	3.5	4.0	*	*	*	*	*	*	0.7	11.7
1966	*	11.0	7.0	4.0	6.0	5.0	0.5	*	*	*	*	*	33.5
1967	*	15.0	5.0	3.0	5.0	*	*	*	*	*	*	*	28.0
1968	1.5	1.5	3.0	20.0	1.5	*	*	*	*	*	5.0	5.0	37.5
1969	*	*	3.0	4.5	4.0	*	*	*	*	*	*	*	11.5
1970	0.9	5.0	*	6.0	8.5	*	*	*	*	*	0.6	*	21.0
1971	1.0	5.0	7.0	3.0	3.5	*	*	*	1.0	*	9.0	13.0	42.5
1972	1.5	3.0	3.0	6.0	2.0	*	*	*	1.0	1.6	4.0	10.0	32.1
1973	2.0	1.0	2.0	9.0	7.0	4.0	1.0	10.0	8.0	3.0	4.0	12.0	63.0
1974	0.5	0.6	1.0	0.8	5.0	7.1	0.6	1.5	3.0	3.5	2.5	7.0	33.1
1975	3.0	5.0	25.0	4.0	7.4	1.1	1.9	1.5	1.5	5.0	8.0	7.0	70.4
1976	0.4	3.0	12.0	1.5	1.0	24.0	21.0	10.0	4.0	6.0	5.0	13.5	101.4
1977	5.2	6.4	10.5	5.0	11.1	*	*	20.0	18.0	9.3	10.0	4.4	99.9
1978	4.8	9.3	6.3	8.9	16.9	23.0	30.0	45.0	4.0	9.7	12.5	11.4	181.8
1979	2.2	8.2	35.0	4.0	16.8	15.0	15.0	8.0	15.0	5.0	2.5	4.0	130.7
1980	1.1	4.0	23.0	4.2	10.9	10.0	13.0	8.0	15.0	8.0	4.2	9.3	110.7
1981	4.8	11.5	12.5	4.1	17.5	11.0	6.0	30.0	10.0	10.0	9.0	9.0	135.4
1982	2.5	8.5	2.8	1.7	8.7	25.0	18.0	25.0	10.0	9.0	7.0	12.8	131.0
1983	1.9	5.3	4.0	4.5	36.2	25.0	25.0	40.0	5.5	7.7	8.3	12.0	183.4
20 Year Total	34.3	118.8	167.1	105.7	181.0	175.2	132.0	297.0	96.0	77.8	91.6	142.1	1,618.6
Avg.	2.1	6.3	9.3	5.3	9.1	14.6	12.0	24.8	7.4	6.5	6.1	8.9	80.9
Escap. Goal	4.0-5.0	10-15	20-40	4.0-5.0	10-15	20-50	20-30	20-50	5-10	8-12	10-15	10-15	141-262

* No surveys conducted due to numerous factors: i.e weather, money.

1/ Most of these estimated escapements are either peak counts from aerial surveys or adjusted figures from aerial surveys based on survey conditions and time of surveys.

Table 10. Pink salmon alevin density by brood year for index streams in the Southern and Outer districts of Cook Inlet, 1964-1982. 7/

Year	Humpy	Tutka	Seldovia	Port Graham	Windy Left	Windy Right	Rocky	Port Dick	Island Creek	China Poot 1/	Ave. 9/
1964	199.1	195.8	284.1	242.1	100.1	75.3	131.3	222.7	80.7	0.0 6/	170.1
1965	245.7	154.7	151.3	40.5	21.2	48.4	0.0 2/	149.6	0.0	244.3	90.2
1966	131.3	120.5	136.6	165.7	28.3	13.9	11.4	43.4	67.4	673.8	79.8
1967	42.0	40.5	177.8 3/	58.1	39.8	83.9	0.0 2/	319.6	0.0	973.8	84.6
1968	628.4 5/	516.5	506.5	302.2	94.6	195.2	142.0 10/	236.1	67.3	1,933.6	298.8
1969	161.4 5/	348.0	493.2	247.9	325.8	779.0	0.0 2/	195.8	0.0	0.0 6/	283.5
1970	517.6	0.0 6/	0.0 6/	106.3	44.1	67.8	0.0 6/	62.4	23.7	0.0 6/	
1972	94.7	149.3	208.3	79.2	0.0 2/	0.0 2/	18.0	39.8	11.8	1,035.1	66.8
1973	377.6	495.4	405.1	187.6	157.7	422.2	0.0	90.6	0.0 2/	0.0 6/	237.4
1974	391.1	584.3	553.2	167.7	0.0 2/	0.0 2/	0.2	25.4	0.0 2/	1,181.5	191.3
1975	724.1	581.3	368.1 8/	379.6	174.5	448.9	22.6	192.2 8/	0.0 2/	1,667.8	321.3
1976	214.0	372.8	315.7	85.7	0.0 2/	0.0 2/	0.5	144.5	0.0 2/	445.7	125.9
1977	1,005.5	353.2	398.0	207.8	405.0	611.3	30.4 8/	480.0	1.7	951.9	388.1
1978	306.8	491.2	394.8	191.7 10/	27.0 11/	27.0	29.8	208.5	4.5	657.1	186.8
1979	764.6	342.0	279.2	283.9	198.2 12/	260.4 12/	204.4	561.5	68.5	268.6	329.2
1980	68.4	194.5	179.6	161.7	162.8	148.1	0.0 13/	62.3	91.1	45.2	118.7
1981	374.2	422.1	520.0	318.6	121.4	299.1	6.2	248.4	233.2	0.0 13/	254.3
1982	210.8	89.2	124.7	193.8	0.0 13/	0.0 13/	0.0 12/	199.3	83.6	753.6	100.1
Total	6,457.2	5,461.3	5,495.2	3,420.1	1,900.5	3,480.5	596.6	3,482.1	733.5	10,835.0	3,347.4
Avg.	358.7	303.4	305.3	190.0	105.6	193.4	33.1	193.5	40.8	601.9	186.0

1/ This streas was not used in further calculations (weighted averages).
2/ Estimated zero fry density since escapements were estimated to be below 300 spawners.
3/ Used average pre-emergent fry density from previous two odd years. Not sampled for 1967.
4/ Average even-year density from years 1962, 1964 and 1966.
5/ Used sample size of 150 points.
6/ Not sampled due to ice conditions.
7/ Sampling invalid due to lateness in 1971.
8/ Possibly had some early outmigration of pink fry salmon.
9/ Averages do not include China Poot.
10/ Incomplete sampling due to high water.
11/ Not samples - assumed to be similar to Windy Right.
12/ Sampled late. Fry already emerged.
13/ Not sampled due to weather.

Table 11. Pink salmon catch for Lower Cook Inlet in thousands of fish by bay during odd numbered years. 1/

Catch Location	1959	1961	1963	1965	1967	1969	1971	1973	1975	1977	1979	1981	1983
Humpy Creek	13.2	67.9	57.4	13.8	40.4	0.6	11.4	44.3	339.4	26.9	298.0	250.9	18.3
Tutka Bay	14.4	106.8	37.7	44.6	31.6	32.4	10.3	20.0	89.2	21.9	411.3	1,023.5	615.4
Seldovia Bay	4.9	15.1	1.6	19.2	11.7	28.7	27.3	19.4	429.6	47.6	140.8	126.4	43.1
Port Graham Bay	5.3	1.0	2.7	12.4	5.1	2.0	1.0	13.9	18.3	44.8	124.7	45.9	2.4
Dogfish Bay	1.6	0	0	0.1	2.3	0	10.4	0.3	0	5.0	7.4	22.9	.2
Port Chatham	1.2	0	0.8	0	0	0	26.3	12.0	16.0	1.4	174.4	47.6	3.3
Windy Bay	3.1	2.2	0	5.4	0	0	57.3	68.5	18.1	173.2	551.4	82.9	0
Rocky Bay	2.3	0	1.4	0.1	0	0	0.1	0.2	0	11.6	122.2	16.5	1.3
Port Dick Bay	28.2	92.9	19.0	15.3	259.9	51.5	94.6	96.6	90.3	880.3	962.9	1,140.9	138.9
Nuka Bay	33.3	2.0	0.3	0	0.1	0	119.7	8.1	35.4	56.3	121.7	395.1	56.4
Resurrection Bay	8.4	0	0	0	1.2	0	0	0	0	0	0	32.6	44.6
Bruin Bay	0	0	12.3	0.9	2.1	0	11.7	0	0	6.2	40.3	51.9	.3
Rocky-Ursus Coves	3.7	2.7	44.2	0	13.0	52.8	16.4	7.9	0	0	14.4	14.1	0
Iniskin and Cottonwood Bays	1.5	3.3	21.8	0	0.1	26.0	0	4.7	0	0.1	0.2	0	.3
Miscellaneous	3.6	9.5	4.4	3.8	8.0	8.4	6.4	11.5	27.1	16.9	16.8	25.0	3.1
Total	124.7	303.4	203.6	115.6	375.5	202.4	392.9	307.4	1,063.4	1,292.2	2,986.5	3,276.2	927.1

1/ Data source IBM computer runs, 1959-83(1983 data preliminary).

Table 12. Pink salmon catch for Lower Cook Inlet in thousands of fish by bay during even numbered years. 1/

Catch Location	1960	1962	1964	1966	1968	1970	1972	1974	1976	1978	1980	1982
Humpy Creek	71.6	108.8	82.4	40.7	43.9	114.1	2.1	35.4	73.1	44.0	53.3	6.0
Tutka Bay	87.6	279.5	100.9	53.5	26.9	43.9	5.2	5.5	18.0	167.9	312.5	184.9
Seldovia Bay	42.6	142.8	37.4	44.1	23.6	28.6	0.2	3.5	3.0	35.4	81.7	70.3
Port Graham Bay	7.1	18.1	38.4	5.1	23.0	12.5	1.1	4.5	3.9	4.0	30.5	35.4
Dogfish Bay	1.8	1.4	0.1	7.1	0	9.8	0.3	0	0	0	4.7	1.7
Port Chatham	15.7	102.2	67.1	6.7	10.0	1.9	0	0	0	0	1.8	12.3
Windy Bay	29.2	85.5	68.6	20.1	3.4	0.8	0	0	0	0	0	0
Rocky Bay	17.0	225.9	53.2	0	10.8	39.8	0	0	0	0	1.4	0
Port Dick Bay	257.4	1,118.3	526.3	296.8	55.0	193.8	0	0.6	0	63.6	133.3	43.9
Nuka Bay	26.6	129.8	23.8	0	90.2	48.4	0.3	0.7	0.1	6.3	12.8	9.3
Resurrection Bay	5.8	0.1	0.3	0	37.4	40.2	18.2	0	35.4	29.7	155.8	137.4
Bruin Bay	2.6	0	0	0	126.2	10.2	0	0	0	0	99.4	13.3
Rocky-Ursus Coves	6.6	3.2	13.5	2.9	18.0	7.5	0	0	0	0.1	0	20.0
Iniskin and Cottonwood Bays	2.1	3.2	4.3	0	9.9	3.5	0	0	0.1	0.1	0.1	0.6
Miscellaneous	37.9	29.5	39.1	102.2	107.1	19.3	1.3	0.4	2.8	1.5	2.4	16.4
Total	611.6	2,248.3	1,055.4	579.2	585.4	574.3	28.7	50.6	136.4	352.6	889.7	551.5

1/ Data resource IBM computer runs, 1960-80.
2/ Preliminary data.

Table 13. Chum salmon catch for lower Cook Inlet in thousands of fish by bay by year. 1/

Catch Location	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Tutka	0.1	2.4	1.8	2.9	2.4	5.6	1.1	3.9	4.0	1.3	0.7
Port Graham	2.3	1.8	0.5	4.0	3.8	2.1	0.9	5.3	3.0	2.3	1.3
Dogfish	4.9	0.4	0.1	0	0.2	0	0	7.0	15.3	0.1	0
Port Chatham	1.0	2.5	0	2.8	4.3	5.2	0	17.8	0	1.0	0
Rocky-Windy	14.9	6.4	2.2	8.5	0.3	33.8	8.1	1.7	0	0.5	0
Port Dick	42.4	53.9	36.8	112.0	110.8	227.4	14.2	60.9	36.0	10.9	5.4
Nuka	1.7	8.4	1.7	0.5	1.5	0	0	0	1.5	6.9	0
Resurrection	0.1	0.5	0	0	0	0	0	0	0.1	0.7	0
Douglas River	0.2	0	0	0	0	0	0	0	0	0	0
Kamishak River	0	0	0	0	0	0	0	0	0	3.7	0
McNeil River	0	0.4	0	0	0	2.7	0.9	0	0.4	8.3	4.4
Bruin	0	0.3	0.5	0	0.1	0	0.4	0	1.0	7.5	0
Ursus-Rocky Coves	8.5	8.6	1.8	1.1	2.8	1.2	0	4.0	2.9	1.0	3.6
Cottonwood and Iniskin	12.1	35.4	10.2	41.7	10.9	38.4	0	0	19.0	25.5	44.4
Miscellaneous	23.7	0	0	5.8	1.4	6.9	2.5	28.5	2.2	5.4	1.4
Total	110.8	116.1	55.6	179.3	138.5	323.3	28.1	129.1	85.4	75.1	61.2

Catch Location	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Tutka	1.6	0.5	1.3	0.8	1.4	2.0	0.9	0.8	2.6	4.9	1.8
Port Graham	4.8	2.0	3.2	2.6	1.0	2.2	0.5	5.0	2.4	4.3	2.5
Dogfish	50.9	114.5	41.1	0.4	0	0	0	9.4	0	8.4	2.1
Port Chatham	0.1	2.4	0	0.2	0	0.6	0	0.1	0	1.7	1.3
Rocky-Windy	39.4	1.4	0	0.9	0	0.3	0	17.7	0	76.7	2.1
Port Dick	21.8	0.7	0	33.4	8.1	6.8	0	25.6	9.1	79.0	19.0
Nuka	5.9	0.1	2.3	40.8	3.9	3.6	0.4	17.4	0.4	14.7	7.8
Resurrection	0.4	0.4	0.7	0	0	0	0	0	0.1	0	0.7
Douglas River	0	0	0	0	0	0.1	7.1	4.0	2.9	0.7	10.0
Kamishak River	0	0	2.4	0	0	0	10.5	0	23.9	17.8	0
McNeil River	1.9	0	2.3	0	2.0	0	16.9	38.5	4.9	6.5	6.3
Bruin	12.8	1.6	1.8	0	0.7	0	0	0	0	4.0	10.6
Ursus-Rocky Coves	8.9	10.3	0.2	5.7	0	2.0	2.8	7.8	1.9	0.5	0.3
Cottonwood and Iniskin	71.9	14.5	19.7	29.9	0	2.8	11.5	15.3	14.9	0.2	5.4
Miscellaneous	3.6	0.2	0.5	0.8	2.1	1.2	0.2	4.2	10.4	3.6	3.6
Total	224.2	148.6	75.5	115.5	19.2	21.6	50.8	145.8	73.5	223.0	73.5

Table 13 (cont.). Chum salmon catches for Lower Cook Inlet in thousands of fish by bay by year.

Catch Location	1981	1982	1983
Tutka	10.8	8.3	9.7
Port Graham	11.2	7.4	1.7
Dogfish	71.8	15.6	2.8
Port Chatham	59.5	14.1	2.1
Rocky-Windy	7.4	0	3.2
Port Dick	95.8	30.3	18.0
Nuka	3.8	0.9	1.1
Resurrection	3.3	7.7	6.9
Douglas River	46.7	37.1	27.2
Kamishak River	8.6	9.2	23.9
McNeil River	11.6	32.6	67.9
Bruin	1.7	1.3	2.6
Ursus-Rocky Coves	1.5	7.2	0
Cottonwood and Iniskin	3.5	21.6	21.4
Miscellaneous	1.9	5.8	3.8
Total	339.1	199.1	192.3

1/ Data source IBM computer runs, 1959-83.
2/ Preliminary data.

Table 14. Sockeye salmon catch for Lower Cook Inlet in thousands of fish by bay by year. 1/

Catch Location	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Resurrection Bay	0	0.1	0	0	0	0	0	0	0	74.5	99.4	1.7
Aialik Bay	1.3	0.2	4.3	2.6	0.5	0	0	0	0	0	0	3.1
Nuka Bay	8.3	6.7	8.2	5.1	0.5	0	2.0	0	2.2	1.5	0	1.0
Humpy Creek	1.3	1.4	0.8	2.0	1.1	0.7	1.4	1.5	1.9	2.7	1.6	1.3
Tutka Bay	1.1	1.7	3.0	5.2	2.9	9.0	5.2	6.0	11.8	6.3	4.9	6.0
Seldovia Bay	0.4	1.2	1.2	1.7	1.2	2.1	0.9	1.0	2.2	1.9	0.8	1.2
Port Graham Bay	6.6	7.8	5.2	6.8	7.8	5.5	3.5	2.7	10.4	7.7	4.3	3.7
Kamishak Bay	1.5	0.8	0	0	0	2.0	0.8	0	0.2	0.5	10.7	2.9
Miscellaneous	1.1	4.8	1.0	1.9	1.1	1.4	2.0	4.1	3.0	0.1	11.0	1.4
Total	21.6	24.7	22.8	25.3	15.1	20.7	14.0	15.3	29.0	95.2	122.8	22.3

Catch Location	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Resurrection Bay	2.2	0.1	0	0	0	0	0	0	0	0	0.6	0
Aialik Bay	0	0.3	3.1	0.2	0.6	0	5.8	0	0	0.1	8.7	3.0
Nuka Bay	1.6	26.1	1.5	0.2	0	18.9	32.5	10.7	24.4	21.5	17.2	66.3
Humpy Creek	1.3	3.7	2.1	3.0	3.5	5.4	3.8	12.9	6.2	11.5	11.3	1.2
Tutka Bay	10.0	14.8	8.1	10.8	12.6	14.2	21.0	92.1	15.6	13.2	40.9	15.8
Seldovia Bay	1.5	2.3	2.2	2.3	2.1	2.1	3.0	5.6	2.6	1.6	5.3	5.0
Port Graham Bay	5.6	10.5	11.7	10.9	9.2	13.6	26.6	30.5	12.9	16.5	20.3	21.5
Kamishak Bay	0	0	0	0	0	4.0	7.4	4.6	1.8	3.9	5.0	18.0
Miscellaneous	0	1.0	5.0	0	1.0	0	0	0	9.0	1.1	1.0	0.5
Total	22.2	57.9	29.2	27.4	28.1	58.2	100.1	156.4	64.4	69.4	110.3	131.3

Table 14. (Continued)

Catch Location	1983 2/
Resurrection Bay	0
Aialik Bay	25.9
Nuka Bay	16.8
Humpy Creek	75.4
Tutka Bay	35.1
Seldovia Bay	6.7
Port Graham Bay	13.4
Kamishak Bay	11.2
Miscellaneous	0.1
Total	184.6

1/ Data source IBM computer runs, 1959-83.
2/ Preliminary data.

Table 15. Salmon catch by species for set gillnets in the Southern District of Lower Cook Inlet, 1958-1983. 1/

Year	Kings	Reds	Cohos	Pinks	Chums	Total
1958	42	3,872	165	2,293	2,274	8,646
1959	49	6,148	377	4,342	361	11,277
1960	6	7,007	398	3,894	347	11,652
1961	15	8,631	216	8,201	425	17,488
1962	13	11,793	1,281	12,207	1,558	26,852
1963	9	8,305	314	1,490	812	10,930
1964	5	16,632	1,576	25,935	1,972	46,120
1965	9	10,998	314	7,267	679	19,267
1966	31	10,317	505	24,981	1,790	37,624
1967	112	22,097	504	13,962	1,929	38,604
1968	31	15,741	1,431	12,614	1,289	31,106
1969	33	11,570	246	10,717	1,298	23,864
1970	26	11,455	1,154	18,512	1,575	32,722
1971	41	18,398	1,449	8,564	1,352	29,804
1972	69	31,340	323	6,303	2,819	40,854
1973	134	23,970	1,089	20,222	2,374	47,789
1974	175	26,966	3,010	11,097	2,713	43,991
1975	96	26,588	2,337	49,490	4,020	82,531
1976	176	33,993	1,321	13,431	1,353	50,274
1977	175	54,404	869	38,064	2,765	96,277
1978	1,052	86,934	3,053	11,556	4,117	106,712
1979	483	34,367	7,595	69,368	5,266	117,079
1980	225	29,922	8,038	26,613	2,576	67,374
1981	222	53,665	6,735	68,794	8,524	137,940
1982	894	42,389	5,557	15,838	7,113	71,791
1983	822	41,707	1,955	20,377	4,377	69,238
26 Year Total	4,945	649,239	51,812	506,132	65,678	1,277,806
26 Year Average	191	24,971	1,993	19,467	2,527	49,147
% of Total	0.39	50.80	4.06	39.60	5.15	100.00

1/ Data source: final IBM computer runs 1958-1983.
2/ Preliminary data.

Table 16. Lower Cook Inlet salmon catch by species, 1954-1983. 1/

Year	King	Red	Coho	Pink	Chum	Total
1954	1,545	39,626	15,159	270,744	265,591	592,665
1955	573	36,600	9,675	1,184,328	68,710	1,299,886
1956	333	36,306	9,345	207,920	88,218	342,122
1957	419	26,917	1,765	285,613	206,450	521,164
1958	120	19,450	1,796	949,766	124,482	1,095,614
1959	132	21,637	6,352	124,748	110,838	263,707
1960	27	24,726	2,692	611,647	116,082	755,174
1961	41	22,776	1,619	303,377	55,593	383,406
1962	60	25,286	7,727	2,248,341	179,259	2,460,673
1963	96	15,121	6,736	203,616	138,510	364,079
1964	91	20,654	9,460	1,055,417	323,335	1,408,957
1965	10	14,002	862	115,598	28,076	158,548
1966	62	15,333	5,411	579,240	129,062	729,108
1967	176	29,044	2,726	375,488	85,445	492,879
1968	64	95,242	4,883	585,441	75,134	760,764
1969	64	122,796	623	202,444	61,203	387,130
1970	107	22,312	4,860	574,284	224,158	825,721
1971	73	22,234	4,561	392,871	148,602	568,341
1972	88	57,897	2,234	28,663	75,543	164,425
1973	145	29,209	2,101	307,403	115,513	454,371
1974	183	27,428	6,514	50,601	19,210	103,936
1975	143	28,142	6,211	1,063,432	21,646	1,119,574
1976	450	58,159	3,216	136,445	50,822	249,092
1977	217	101,597	3,232	1,292,153	145,778	1,542,977
1978	1,747	156,404	6,529	352,561	73,518	590,759
1979	1,238	64,417	12,250	2,986,534	223,028	3,287,467
1980	424	69,442	14,505	889,703	73,492	1,047,566
1981	1,086	110,255	10,778	3,276,221	339,053	3,737,393
1982	1,066	131,320	46,892	551,522	197,987	928,787
1983 2/	873	184,641	10,782	927,451	192,319	1,316,066
30 Year Total	11,653	1,628,973	221,496	22,133,572	3,956,657	27,952,351
30 Year Average	388	54,299	7,383	737,786	131,889	931,745
% of Total	0.04	5.83	0.79	79.18	14.16	100.00

1/ Data source: final IBM computer runs, 1954-1983 and processor catch reports.
2/ Preliminary data.

Table 17. Southern district salmon catch by species, 1954-1983. 1/

Year	King	Sockeye	Coho	Pink	Chum	Total
1954	1,532	22,913	12,235	180,977	150,769	368,426
1955	562	30,848	3,230	565,216	24,398	624,254
1956	310	33,054	4,693	150,486	53,515	242,058
1957	286	19,431	1,507	130,511	57,403	209,138
1958	119	17,731	1,713	209,798	24,096	253,457
1959	71	7,720	709	50,244	13,967	72,711
1960	12	12,239	1,237	209,989	4,100	227,577
1961	39	10,104	1,149	191,867	2,916	206,075
1962	58	16,569	2,095	564,050	9,078	591,850
1963	88	13,142	4,020	99,820	7,523	124,593
1964	84	17,283	8,905	266,412	11,529	304,213
1965	10	11,185	733	90,260	2,458	104,646
1966	60	12,192	4,807	177,544	28,754	223,357
1967	173	26,349	2,379	92,793	23,416	145,110
1968	61	18,716	4,671	154,033	4,403	181,884
1969	59	12,578	485	70,753	2,600	86,475
1970	91	13,480	3,705	208,114	8,174	233,564
1971	41	18,403	3,151	50,066	2,857	74,518
1972	69	31,345	1,283	9,126	4,936	46,759
1973	139	24,145	1,241	97,574	3,588	126,687
1974	182	27,029	3,054	48,875	2,725	81,865
1975	142	27,393	3,039	893,709	5,428	929,711
1976	442	35,280	1,905	99,817	1,517	138,961
1977	182	54,663	1,239	156,696	6,723	219,503
1978	1,511	141,088	4,318	251,761	5,525	404,203
1979	1,199	37,342	10,688	982,529	12,759	1,044,517
1980	414	42,929	11,568	478,019	4,605	537,535
1981	1,024	77,880	7,976	1,451,022	23,880	1,561,782
1982	926	43,433	7,165	296,556	18,466	366,546
1983 2/	858	130,667	3,589	690,098	14,281	839,493
30 year Total	10,744	987,131	118,489	8,918,715	536,389	10,571,468
30 Year Average	358	32,904	3,950	297,291	17,880	352,382
% of Total	0.10	9.34	1.12	84.37	5.07	100.00

1/ Data source: Final IBM computer runs, 1954-1983, and processor catch reports.
2/ Preliminary data.

Table 18. Outer district salmon catch by species, 1954-1983. 1/

Year	King	Sockeye	Coho	Pink	Chum	Total
1954	13	4,927	368	82,205	112,877	200,390
1955	7	701	277	557,997	40,887	599,869
1956	23	2,889	190	42,368	19,248	64,718
1957	13	2,982	110	149,197	138,171	290,473
1958	1	1,719	83	739,768	100,386	841,957
1959	3	8,049	109	69,054	59,996	137,211
1960	4	11,614	574	381,375	67,187	460,754
1961	2	12,671	456	105,491	40,212	158,832
1962	2	8,697	1,893	1,684,023	126,767	1,821,382
1963	6	1,974	369	21,471	117,095	140,915
1964	2	1,370	431	767,473	269,514	1,038,790
1965	0	2,009	7	21,886	22,443	46,345
1966	1	3,120	357	398,751	87,620	489,849
1967	2	2,165	70	262,258	37,533	302,028
1968	1	1,550	106	191,691	20,398	213,746
1969	0	92	11	51,533	5,400	57,036
1970	5	4,177	243	302,831	118,746	426,002
1971	11	1,630	174	310,710	118,995	431,520
1972	7	26,423	17	1,005	43,490	70,942
1973	1	5,063	31	197,259	76,341	278,695
1974	1	399	28	1,678	11,931	14,037
1975	0	720	7	160,291	11,350	172,368
1976	7	18,386	0	93	412	19,398
1977	34	33,733	1,528	1,127,800	70,167	1,233,262
1978	236	10,695	45	70,080	19,224	100,280
1979	30	25,297	150	1,945,521	180,558	2,151,556
1980	10	22,514	16	154,041	32,246	208,827
1981	61	18,133	485	1,714,115	238,393	1,971,187
1982	129	66,781	92	67,456	62,877	197,335
1983 2/	14	16,835	54	199,794	27,203	243,900
30 Year Total	626	317,815	8,281	11,779,215	2,277,667	14,383,604
30 Year Average	21	10,594	276	392,641	75,922	479,453
% of Total	+	2.21	0.06	81.89	15.84	100.00

1/ Data source: Final IBM computer runs, 1954-1983, and processor catch reports.
2/ Preliminary data.

Table 19. Kamishak Bay district salmon catch by species, 1954-1983. 1/

Year	King	Sockeye	Coho	Pink	Chum	Total
1954	0	0	0	0	0	0
1955	0	2	8	5,121	278	5,409
1956	0	67	701	193	14,936	15,897
1957	0	4,335	29	5,905	10,856	21,125
1958	0	0	0	0	0	0
1959	0	1,549	43	5,325	23,574	30,491
1960	11	768	28	11,563	44,328	56,698
1961	0	1	14	6,019	12,465	18,499
1962	0	20	11	219	43,404	43,654
1963	2	4	97	82,314	13,892	96,309
1964	5	1,979	115	20,719	42,280	65,098
1965	0	808	122	3,452	3,175	7,557
1966	1	21	247	2,945	12,688	15,902
1967	1	182	74	17,340	24,221	41,818
1968	0	492	101	198,253	49,461	248,307
1969	2	10,723	121	80,157	53,193	144,196
1970	0	2,888	220	23,113	96,605	122,826
1971	0	3	121	32,094	26,327	58,545
1972	0	47	31	342	26,374	26,794
1973	0	1	28	12,568	35,584	48,181
1974	0	0	2,915	48	4,554	7,517
1975	0	29	3,041	9,432	4,868	17,370
1976	1	3,988	1,111	1,112	48,848	55,060
1977	1	7,425	105	6,308	65,659	79,498
1978	0	4,619	1,584	982	48,669	55,854
1979	9	1,778	1,116	58,484	29,711	91,098
1980	0	3,877	2,495	101,864	35,921	144,157
1981	1	4,972	1,845	66,097	73,501	146,416
1982	11	18,014	38,685	43,871	108,946	209,527
1983 2/	1	11,207	7,138	1,405	142,901	162,652
30 Year Total	46	79,799	62,146	797,245	1,097,219	2,036,455
30 Year Average	2	2,660	2,072	26,575	36,574	67,882
% of Total	+	3.92	3.05	39.15	53.88	100.00

1/ Data source: Final IBM computer runs, 1954-1983, and processor catch reports.
2/ Preliminary data.

Table 20. Eastern district salmon catch by species, 1954-1983. 1/

Year	King	Sockeye	Coho	Pink	Chum	Total
1954	0	11,786	2,556	7,562	1,945	23,849
1955	4	5,049	6,160	55,994	3,147	70,354
1956	0	296	3,761	14,873	519	19,449
1957	120	169	119	0	20	428
1958	0	0	0	200	0	200
1959	58	4,319	5,491	125	13,301	23,294
1960	0	105	853	8,720	467	10,145
1961	0	0	0	0	0	0
1962	0	0	3,728	49	10	3,787
1963	0	1	2,250	11	0	2,262
1964	0	22	9	813	12	856
1965	0	0	0	0	0	0
1966	0	0	0	0	0	0
1967	0	348	203	3,097	275	3,923
1968	2	74,484	5	41,464	872	116,827
1969	3	99,403	6	1	10	99,423
1970	11	1,767	692	40,226	633	43,329
1971	21	2,198	1,115	1	423	3,758
1972	12	82	903	18,190	743	19,930
1973	5	0	801	2	0	808
1974	0	0	517	0	0	517
1975	1	0	124	0	0	123
1976	0	5	200	35,423	45	35,673
1977	0	5,776	360	1,349	3,229	10,714
1978	0	2	582	29,738	100	30,422
1979	0	0	296	0	0	296
1980	0	122	426	155,779	720	157,047
1981	0	9,270	472	44,987	3,279	58,008
1982	0	3,092	950	143,639	7,698	155,379
1983 2/	0	25,932	1	36,154	7,934	70,021
30 Year Total	237	244,228	32,580	638,397	45,382	960,824
30 Year Average	8	8,141	1,086	21,280	1,531	32,027
% of Total	0.03	25.42	3.39	66.44	4.72	100.00

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.
2/ Preliminary data.

Table 21. Summary of subsistence fisheraen in Lower Cook Inlet by area of residence.

Area Residence of Permittee	Homer #	Homer %	Anchorage Area #	Anchorage Area %	Halibut Cove #	Halibut Cove %	Anchor Point #	Anchor Point %	Seldovia #	Seldovia %	Port Graham/ English Bay #	Port Graham/ English Bay %	Kenai/ Soldotna #	Kenai/ Soldotna %	Other #	Other %	Total Permits Issued
1974	108	73.0	20	13.5	6	4.1	4	2.7	1	0.7	3	2.0	5	3.4	1	0.7	148
1975	118	75.2	13	8.3	6	3.8	7	4.5	5	3.2	2	1.3	4	2.5	2	1.3	157
1976	182	70.0	24	9.2	9	3.5	25	9.6	5	1.9	4	1.5	6	2.3	5	1.9	260
1977	153	77.3	8	4.0	8	4.0	17	8.6	7	3.6	0	0	2	1.0	3	1.6	198
1978	214	68.8	40	12.9	5	1.6	30	9.6	12	3.8	3	1.0	4	1.3	3	1.0	311
1979	276	62.7	67	15.2	2	0.5	61	13.9	3	0.7	0	0	11	2.5	20	4.6	440
1980	310	58.2	81	15.2	0	0	80	15.0	7	1.3	0	0	42	7.9	13	2.4	533
1981	274	71.4	43	11.2	8	2.1	37	9.6	3	0.8	1	0.3	14	3.6	4	1.0	384
1982	295	74.7	19	4.8	9	2.3	44	11.1	0	0	0	0	7	1.8	21	5.3	395
1983	267	77.9	24	7.0	3	0.9	33	9.6	8	2.3	0	0	0	0	8	2.3	343
10 Year Total	2,197	-	339	-	56	-	338	-	51	-	13	-	95	-	80	-	3,169
10 Year Average	220	69.3	34	10.7	6	1.8	34	10.7	5	1.6	1	0.4	10	3.0	8	2.5	317

Table 22. Subsistence fishery catches for the Southern district of Cook Inlet, 1969-1983.

Year	Permits Issued	Returned	Not Fished	Returned	King	Sockeye	Coho	Pink	Chum	Other	Total
1969	47	44	9	93.6	0	9	752	38	0	17	816
1970	78	73	18	93.6	0	12	1,179	143	13	39	1,386
1971	112	95	42	84.8	2	16	1,549	44	7	20	1,638
1972	135	105	41	77.8	1	11	975	48	69	19	1,123
1973	143	128	46	89.5	0	18	1,304	84	40	9	1,455
1974	148	118	66	80.3	0	16	376	43	77	27	539
1975	292	276	55	94.5	4	47	1,960	632	61	95	2,799
1976	242	221	83	91.3	16	46	1,962	1,513	56	75	3,668
1977	197	179	42	90.9	12	46	2,216	639	119	84	3,116
1978	311	264	113	84.9	4	35	2,482	595	34	89	3,239
1979	437	401	163	91.8	6	37	2,118	2,251	41	130	4,583
1980 3/	533	494	195	92.7	43	32	3,491	1,021	25	153 2/	4,765
1981	384	374	100	97.4	25	64	4,314	732	89	+100	5,324
1982	395	378	71	95.7	39	46	7,303	955	123	8	8,474
1983	343	330	118	96.2	4	21	2,525	330	40	2	2,922
15 Year Total	3,797	3,480	1,162	-	156	456	34,506	9,068	794	867	45,847
15 Year Average	253	232	77	91.7	10	30	2,300	605	53	58	3,056

1/ Preliminary data.
2/ Steelhead.
3/ Data do not contain 953 sockeye and 5 pink salmon taken in the China Poot dip net fishery; 220 permits were issued, 206 returned and 112 of them did not fish.

Table 23. Port Graham subsistence salmon harvest by year and month.

Year/Month	Chinook	Sockeye	Coho	Pink	Chum	Sub-Total	Calendars	Harve Days
1979								
Total *	222	777	506	1,170	494	3,249	-	-
1981								
May	31	543	-	-	-	574	39/47	94
June	11	923	-	7	6	947	36/47	61
July	74	209	-	74	92	449	37/47	36
August	-	19	173	176	50	418	38/47	45
September	-	-	452	41	2	495	41/47	32
October	-	-	**	**	-	**	-	-
Totals	116	1,694	625	298	150	2,883	-	268
1982								
May	32	264	-	-	3	299	36/36	46
June	34	442	1	37	31	545	37/38	107
July	28	74	4	465	68	639	38/38	63
August	4	5	209	229	76	523	34/35	73
September	-	13	294	120	15	442	28/34	59
October	-	-	**	-	-	**	--	-
Totals	98	798	508	851	198	2,448	--	348
1983 1/								
May 10-31	19	368	0	0	0	387	31	-
June 1-15	38	697	0	5	1	741	19	-
August 16-31	0	1	232	76	53	362	16	-
Sept. 1-30	0	0	208	88	11	307	13	-
Totals	57	1,066	440	169	65	1,797		-

*Estimate
**Some harvest, no estimate.
1/ Not comparable to 1981 and 1982 data.
Contains catches in gillnets during open subsistence periods only an does not include harvests with other types of gear or during closed subsistence fishing times.

Table 24. English Bay subsistence salmon harvest by year and month.

Year/Month	Chinook	Sockeye	Coho	Pink	Chum	Sub-Total	Calendars	Harvest Days
1979								
Total*	137	1,545	2,437	2,186	305	6,610	-	-
1981								
May	1	609	-	-	-	610	25/29	76
June	10	330	-	-	-	354	22/29	61
July	10	53	1	1	5	161	22/29	27
August	3	58	99	376	14	550	23/29	92
September	-	25	214	139	-	378	20/29	61
October	-	-	**	**	-	**	-	-
Totals	24	1,075	314	621	19	2,053	-	317
1982								
May	2	259	-	-	7	268	36/36	79
June	2	809	1	3	1	816	31/31	115
July	4	70	-	101	-	175	31/31	37
August	5	427	143	977	18	1,570	25/29	127
September	-	19	756	724	10	1,509	27/29	150
October	-	-	405*	45*	-	450*	-	-
Totals	13	1,584	1,305	1,850	36	4,788	-	508
1983 1/								
May 10-31	0	807	0	0	0	807	28	-
June 1-15	0	655	0	0	0	655	17	-
August 16-31	0	210	65	363	0	638	14	-
Sept. 1-30	0	112	302	0	0	414	10	-
Totals	0	1,784	367	363	0	2,514	-	-

*Estimate.
**Some harvest, no estimate.
1/ Not comparable to 1981 and 1982 data.
Contains catches in gillnets during open subsistence periods only and does not include harvests with other types of gear or during closed subsistence fishing times.

Appendix Table 1. Fishing licenses and permits issued and fished in Lower Cook Inlet, 1960-1983.

	Gear	Seines			Seines	Set Nets
Year	License	Permanent Permit	Interim Permit	Total	Fished	Fished
1960	95			95		
1961	89			89		
1962	91			91		
1963	112			112		
1964	108			108		
1965	72			72		
1966	77			77	75	
1967	58			58	54	
1968	91			91	88	
1969	75			75	17	
1970	89			89	9	
1971	81			81	32	
1972	83			83	52	
1973	86			86	49	
1974	110			110	49	32
1975		40	48	88	63	27
1976		74	16	90	53	25
1977		70	12	82	72	26
1978		77	9	86	72	39
1979		82	5	87	75	38
1980		81	10	91	83	40
1981		80	11	91	91	40
1982		72	7	79	69	39
1983		81	4	85	85	24
Total	1,317	657	122	2,096	1,088	330
Average	88	73	14	87	60	33

*Data source: CFEC microfiche printouts and final IBM computer runs.

Appendix Table 2. Ex-vessel value of Lower Cook Inlet commercial salmon harvest in thousands of dollars by species, 1960-1983.

Year	King	Sockeye	Coho	Pink	Chum	Total
1960	0	36	3	287	127	453
1961	0	33	2	144	36	215
1962	0	37	8	1,056	108	1,209
1963	1	22	7	87	84	201
1964	0	30	9	369	194	602
1965	0	21	1	34	20	76
1966	0	23	5	237	82	347
1967	1	45	3	157	58	264
1968	0	152	5	311	57	525
1969	0	219	1	137	46	403
1970	1	35	6	273	215	530
1971	1	38	7	248	144	438
1972	1	130	6	22	146	305
1973	3	113	5	310	251	682
1974	5	283	30	100	77	495
1975	3	106	27	1,456	71	1,663
1976	7	287	13	207	217	731
1977	7	620	9	1,719	604	2,959
1978	62	1,516	52	370	341	2,341
1979	36	621	68	4,495	1,097	6,317
1980	12	336	64	1,082	298	1,792
1981	18	706	60	5,334	1,291	7,409
1982	28	780	367	318	820	2,313
1983	10	536	16	589	476	1,627
24 Year Total	196	6,725	774	19,342	6,860	33,897
24 Year Average	8	280	32	806	286	1,412

1/ Values obtained by using the formula: average price per lb. x average weight of fish x catch = Ex-vessel value.

2/ Preliminary data.

Appendix Table 3. Average salmon price per pound by species in dollars, Lower Cook Inlet, 1960-1983. 1/

Year	King	Sockeye	Coho	Pink	Chum
1960	0.25 2/	0.27	0.18	0.15	0.16
1961	0.24 2/	0.24	0.15	0.11	0.08
1962	0.23 2/	0.27	0.16	0.15	0.07
1963	0.25 2/	0.27	0.15	0.13	0.08
1964	0.24 2/	0.27	0.15	0.10	0.07
1965	0.22 2/	0.24	0.11	0.08	0.08
1966	0.22 2/	0.24	0.14	0.11	0.08
1967	0.26	0.26	0.15	0.11	0.08
1968	0	0.25	0.17	0.18	0.09
1969	0	0.27	0.23	0.17	0.13
1970	0.35	0.27	0.18	0.12	0.13
1971	0.53	0.28	0.24	0.18	0.15
1972	0.45	0.36	0.44	0.20	0.28
1973	0.93	0.48	0.39	0.27	0.29
1974	0.76	1.54	0.72	0.48	0.56
1975	0.61	0.61	0.49	0.37	0.43
1976	0.91	0.77	0.59	0.37	0.48
1977	1.07	0.86	0.55	0.35	0.45
1978	1.09	1.31	0.97	0.30	0.54
1979	1.54	1.53	0.89	0.43	0.60
1980	1.30	0.88	0.85	0.38	0.52
1981	1.35	1.05	0.65	0.44	0.47
1982	1.29	0.99	0.87	0.18	0.46
1983	0.50	0.73	0.24	0.21	0.27

1/ 1960-1974 values obtained (except as noted) by using the formula: Avg. price/lb. x avg. weight/fish x catch = ex-vessel value. Ex-vessel values obtained from Tables 34 & 39 in Lower Cook Inlet status report. Avg. weight/fish from commercial fish catch & production statistical leaflet for Cook Inlet. Values do not reflect any retroactive price increases paid after the fishing seasons.

2/ Values obtained by using formula:

$$\text{Avg. price/lb.} = \frac{\text{Avg. price/fish}}{\text{Avg. weight/fish}}$$

Avg. weight/fish from statistical leaflet. Avg. price/fish from annual management reports.

3/ Preliminary data.

Appendix Table 4. Salmon average weight per fish in pounds for Lower Cook Inlet, 1960-1983. 1/

Year	King	Sockeye	Coho	Pink	Chum
1960	20.2	5.4	6.2	3.2	6.8
1961	20.5	6.0	8.2	4.5	7.8
1962	21.5	5.4	6.4	3.2	8.0
1963	19.7	5.4	7.1	3.4	7.2
1964	20.8	5.4	6.3	3.5	8.4
1965	22.2	6.2	10.1	3.6	8.7
1966	23.1	5.9	6.4	3.6	7.5
1967	21.9	6.0	7.2	3.9	8.1
1968	26.2	6.3	5.9	3.0	8.3
1969	18.2	6.7	7.0	3.9	7.3
1970	26.6	5.8	6.8	3.9	7.1
1971	25.9	6.0	6.3	3.5	6.6
1972	25.0	6.2	6.1	3.9	6.9
1973	22.3	8.1	6.1	3.7	7.4
1974	36.1	6.7	6.4	4.1	7.2
1975	33.2	6.2	8.8	3.7	7.6
1976	16.1	6.4	7.0	4.1	8.9
1977	30.1	7.2	5.9	3.8	9.2
1978	32.3	7.4	8.2	3.5	8.6
1979	18.9	6.3	6.2	3.5	8.2
1980	21.7	5.5	5.2	3.2	7.8
1981	12.5	6.1	8.5	3.7	8.1
1982	20.6	6.0	9.0	3.2	9.0
1983	22.8	5.0	7.2	3.0	9.2
24 Year Total	533.4	147.6	168.5	86.6	189.9
24 Year Average	22.2	6.2	7.0	3.6	7.9

1/ 1960-1974 values obtained from commercial fish catch & production statistical leaflets. Remaining years from IBM computer runs.

Appendix Table 5. Salmon case pack by species, Cook Inlet, 1960-1983. 1/

Year	King	Sockeye	Coho	Pink	Chum	Total
			48 1-lb. Cans per Case			
1960	9,279	65,478	24,091	87,575	62,709	249,132
1961	12,942	88,687	10,673	30,401	39,092	181,795
1962	8,721	89,231	28,611	208,392	107,724	442,679
1963	8,138	74,185	20,898	13,509	46,209	162,939
1964	921	75,944	40,137	188,373	135,466	440,841
1965	1,221	109,663	11,999	5,911	27,187	155,981
1966	1,472	142,987	22,985	102,796	49,680	319,920
1967	1,909	118,853	15,355	21,492	38,654	196,263
1968	447	58,365	29,290	104,382	122,164	314,648
1969	1,277	43,408	6,985	86,038	26,580	164,288
1970	412	78,453	19,010	80,572	73,633	252,080
1971	1,036	68,357	8,847	91,880	52,223	222,343
1972	396	101,105	10,109	25,195	56,527	193,332
1973	712	53,954	7,049	47,829	87,214	196,758
1974	1,193	52,990	13,482	44,610	85,288	197,563
1975	169	60,359	6,298	55,454	40,491	162,771
1976	872	127,434	11,238	103,260	51,171	293,975
1977	780	232,956	9,558	104,088	92,284	439,666
1978	1,070	156,803	8,525	155,460	56,339	378,197
1979	457	104,022	2,836	249,422	26,190	382,927
1980	4,860	144,742	6,367	231,897	27,967	415,833
1981	215	40,959	4,271	291,968	45,758	383,171
1982	82	28,919	33,216	208,583	14,365	285,165
1983	25	119,083	7,476	196,470	22,437	345,491
Total	58,606	2,236,937	359,306	2,735,557	1,387,352	6,777,758
Average	2,442	93,206	14,971	113,982	57,806	282,407

1/ Includes Cook Inlet salmon and salmon imported from other areas and processed in Cook Inlet.

Appendix Table 6. Commercial production of fresh, frozen and cured salmon by species, Cook Inlet, 1971-1983. 1/

Year	Production in Pounds					
	King	Sockeye	Coho	Pink	Chum	Total
1971	1,122,833	858,298	230,995	29,943	2,147,814	4,389,883
1972	697,871	661,537	126,717	647,952	1,904,750	4,038,827
1973	434,283	2,251,760	478,334	326,169	5,032,885	8,523,431
1974	474,170	1,239,399	964,636	1,164,061	4,902,531	8,744,797
1975	274,563	1,490,354	851,260	581,883	5,923,465	9,121,525
1976	511,231	5,428,655	684,206	2,274,473	4,243,440	13,142,005
1977	842,240	8,265,220	754,610	580,070	5,439,190	15,881,330
1978	1,463,785	20,243,930	1,475,932	5,533,116	7,533,722	36,250,485
1979	426,710	9,479,792	1,578,032	2,375,713	4,076,813	17,937,060
1980	729,612	13,523,357	1,780,131	4,272,809	3,947,040	24,252,949
1981	711,934	18,813,717	3,663,104	3,285,847	8,268,107	34,742,709
1982	1,743,455	32,475,335	5,990,705	4,837,524	14,648,214	59,695,233
1983	1,136,123	33,028,028	2,589,079	494,258	8,765,092	46,012,580
Total	10,568,810	147,759,382	21,167,741	26,402,918	76,833,063	282,731,914
Average	812,985	11,366,106	1,628,288	2,030,994	5,910,236	21,748,609

1/ Includes Cook Inlet salmon and salmon imported from other areas and processed in Cook Inlet.

Appendix Table 7. Summary of return per spawner and forecast variations which have occurred in the pink salmon runs to the Southern and Outer districts of Cook Inlet, 1964-1981.

Brood Year	Escapement	Return	Return/ Spawner	Forecast	Variation from Forecast	
1964	269.9	828	3.07	1,300	-	36.3
1965	142.3	478	3.36	500	-	4.4
1966	252.0	542	2.15	462	+	17.3
1967	122.5	238	1.94	500	-	52.4
1968	196.3	699	3.56	2,000	-	65.0
1969	115.2	615	5.34	640	-	3.9
1972	43.9	91	2.07	340	-	73.5
1973	111.3	1,298	11.66	620	+	109.4
1974	40.2	197	4.90	780	-	74.9
1975	240.8	1,652	6.86	845	+	102.0
1976	86.6	488	3.90 2/	535	-	24.0
1977	361.3	3,507	8.67 2/	1,647 3/	+	112.9
1978	147.3	899	3.96 2/	1,295 3/	-	30.6
1979	574.7	3,706	4.68 2/	2,992 3/	+	23.9
1980 1/	266.3	532	1.13 2/	1,053 3/	-	49.6
1981	409.2	1,106	1.13 2/	2,724 3/	-	59.4
Total	3,379.8	16,876	68.38	18,333		
Average	211.2	1,055	4.27	1,146	-	7.94

1/ Preliminary data.
2/ Calculated by subtracting hatchery return from total return:
150,000 in 1978
370,000 in 1979
315,000 in 1980
1,019,000 in 1981
232,000 in 1982
645,000 in 1983
3/ Includes projected hatchery return.

Appendix Table 8. Lower Cook Inlet total salmon catch by district, 1954-1983. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
1954	368,426	200,390	0	23,849	592,665
1955	624,254	599,869	5,409	70,354	1,299,886
1956	242,058	64,718	15,897	19,449	342,122
1957	209,138	290,473	21,125	428	521,164
1958	253,457	841,957	0	200	1,095,614
1959	72,711	137,211	30,491	23,294	263,707
1960	227,577	460,754	56,698	10,145	755,174
1961	206,075	158,832	18,499	0	383,406
1962	591,850	1,821,382	43,654	3,787	2,460,673
1963	124,593	140,915	96,309	2,262	364,079
1964	304,213	1,038,790	65,098	856	1,408,957
1965	104,646	46,345	7,557	0	158,548
1966	223,357	489,849	15,902	0	729,108
1967	145,110	302,028	41,818	3,923	492,879
1968	181,884	213,746	248,307	116,827	760,764
1969	86,475	57,036	144,166	99,423	387,130
1970	233,564	426,002	122,826	43,329	825,721
1971	74,518	431,520	58,545	3,758	568,341
1972	46,759	70,942	26,794	19,930	164,425
1973	126,687	278,695	48,181	808	454,371
1974	81,865	14,037	7,517	517	103,936
1975	929,711	172,368	17,370	125	1,119,574
1976	138,961	19,398	55,060	35,673	249,092
1977	219,503	1,233,262	79,498	10,714	1,542,977
1978	404,203	100,280	55,854	30,422	590,759
1979	1,044,517	2,151,556	91,098	296	3,287,467
1980	537,535	208,827	144,157	157,047	1,047,566
1981	1,561,782	1,971,187	146,416	58,008	3,737,393
1982	366,546	197,335	209,527	155,379	928,787
1983 2/	839,493	243,900	162,652	70,021	1,316,066
30 Year Total	10,571,468	14,383,604	2,036,455	960,824	27,952,351
30 Year Average	352,382	479,454	67,882	32,027	931,745
% of Total	37.82	51.46	7.28	3.44	100.00

1/ Data source: Final IBM computer runs, 1954-1982 and processor catch reports.
2/ Preliminary data.

Appendix Table 9. King salmon catch by district for Lower Cook Inlet, 1954-1983. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
1954	1,532	13	0	0	1,545
1955	562	7	0	4	573
1956	310	23	0	0	333
1957	286	13	0	120	419
1958	119	1	0	0	120
1959	71	3	0	58	132
1960	12	4	11	0	27
1961	39	2	0	0	41
1962	58	2	0	0	60
1963	88	6	2	0	96
1964	84	2	5	0	91
1965	10	0	0	0	10
1966	60	1	1	0	62
1967	173	2	1	0	176
1968	61	1	0	2	64
1969	59	0	2	3	64
1970	91	5	0	11	107
1971	41	11	0	21	73
1972	69	7	0	12	88
1973	139	1	0	5	145
1974	182	1	0	0	183
1975	142	0	0	1	143
1976	442	7	1	0	450
1977	182	34	1	0	217
1978	1,511	236	0	0	1,747
1979	1,199	30	9	0	1,238
1980	414	10	0	0	424
1981	1,024	61	1	0	1,086
1982	926	129	11	0	1,066
1983 2/	858	14	1	0	873
30 Year Total	10,744	626	46	237	11,653
30 Year Average	358	21	1	8	388
% of Total	92.20	5.37	0.40	2.03	100.00

1/ Data source: Final IBM computer runs, 1954-1982 and processor catch reports.
2/ Preliminary data.

Appendix Table 10. Sockeye salmon catch by district for Lower Cook Inlet, 1954-1983. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
1954	22,913	4,927	0	11,786	39,626
1955	30,848	701	2	5,049	36,600
1956	33,054	2,889	67	296	36,306
1957	19,431	2,982	4,335	169	26,917
1958	17,731	1,719	0	0	19,450
1959	7,720	8,049	1,549	4,319	21,637
1960	12,239	11,614	768	105	24,726
1961	10,104	12,671	1	0	22,776
1962	16,569	8,697	20	0	25,286
1963	13,142	1,974	4	1	15,121
1964	17,283	1,370	1,979	22	20,654
1965	11,185	2,009	808	0	14,002
1966	12,192	3,120	21	0	15,333
1967	26,349	2,165	182	348	29,044
1968	18,716	1,550	492	74,484	95,242
1969	12,578	92	10,723	99,403	122,796
1970	13,480	4,177	2,888	1,767	22,312
1971	18,403	1,630	3	2,198	22,234
1972	31,345	26,423	47	82	57,897
1973	24,145	5,063	1	0	29,209
1974	27,029	399	0	0	27,428
1975	27,393	720	29	0	28,142
1976	35,280	18,886	3,988	5	58,159
1977	54,663	33,733	7,425	5,776	101,597
1978	141,088	10,695	4,619	2	156,404
1979	37,342	25,297	1,778	0	64,417
1980	42,929	22,514	3,877	122	69,442
1981	77,880	18,133	4,972	9,270	110,255
1982	43,433	66,781	18,014	3,092	131,320
1983 2/	130,667	16,835	11,207	25,932	184,641
30 Year Total	987,131	317,815	79,799	244,228	1,628,973
30 Year Average	32,904	10,594	2,660	8,141	54,299
% of Total	60.60	19.51	4.90	14.99	100.00

1/ Data source: Final IBM computer runs,1954-1982 and processor catch reports.
2/ Preliminary data.

Appendix Table 11. Coho salmon catch by district for Lower Cook Inlet, 1954-1983. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
1954	12,235	368	0	2,556	15,159
1955	3,230	277	8	6,160	9,675
1956	4,693	190	701	3,761	9,345
1957	1,507	110	29	119	1,765
1958	1,713	83	0	0	1,796
1959	709	109	43	5,491	6,352
1960	1,237	574	28	853	2,692
1961	1,149	456	14	0	1,619
1962	2,095	1,893	11	3,728	7,727
1963	4,020	369	97	2,250	6,736
1964	8,905	431	115	9	9,460
1965	733	7	122	0	862
1966	4,807	357	247	0	5,411
1967	2,379	70	74	203	2,726
1968	4,671	106	101	5	4,883
1969	485	11	121	6	623
1970	3,705	243	220	692	4,860
1971	3,151	174	121	1,115	4,561
1972	1,283	17	31	903	2,234
1973	1,241	31	28	801	2,101
1974	3,054	28	2,915	517	6,514
1975	3,039	7	3,041	124	6,211
1976	1,905	0	1,111	200	3,216
1977	1,239	1,528	105	360	3,232
1978	4,318	45	1,584	582	6,529
1979	10,688	150	1,116	296	12,250
1980	11,568	16	2,495	426	14,505
1981	7,976	485	1,845	472	10,778
1982	7,165	92	38,685	950	46,892
1983 2/	3,589	54	7,138	1	10,782
30 Year Total	118,489	8,281	62,146	32,580	221,496
30 Year Average	3,950	276	2,071	1,086	7,383
% of Total	53.49	3.74	28.06	14.71	100.00

1/ Data source: Final IBM computer runs,1954-1982 and processor catch reports.
2/ Preliminary data.

Appendix Table 12. Pink salmon catch by district for Lower Cook Inlet, 1954-1983. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
1954	180,977	82,205	0	7,562	270,744
1955	565,216	557,997	5,121	55,994	1,184,328
1956	150,486	42,368	193	14,873	207,920
1957	130,511	149,197	5,905	0	285,613
1958	209,798	739,768	0	200	949,766
1959	50,244	69,054	5,325	125	124,748
1960	209,989	381,375	11,563	8,720	611,647
1961	191,867	105,491	6,019	0	303,377
1962	564,050	1,684,023	219	49	2,248,341
1963	99,820	21,471	82,314	11	203,616
1964	266,412	767,743	20,719	813	1,055,417
1965	90,260	21,886	3,452	0	115,598
1966	177,544	398,751	2,945	0	579,240
1967	92,793	262,258	17,340	3,097	375,488
1968	154,033	191,691	198,253	41,464	585,441
1969	70,753	51,533	80,157	1	202,444
1970	208,114	302,831	23,113	40,226	574,284
1971	50,066	310,710	32,094	1	392,871
1972	9,126	1,005	342	18,190	28,663
1973	97,574	197,259	12,568	2	307,403
1974	48,875	1,678	48	0	50,601
1975	893,709	160,291	9,432	0	1,063,432
1976	99,817	93	1,112	35,423	136,445
1977	156,696	1,127,800	6,308	1,349	1,292,153
1978	251,761	70,080	982	29,738	352,561
1979	982,529	1,945,521	58,484	0	2,986,534
1980	478,019	154,041	101,864	155,779	889,703
1981	1,451,022	1,714,115	66,097	44,987	3,276,221
1982	296,556	67,456	43,871	143,639	551,522
1983 2/	690,098	199,794	1,405	36,154	927,451
30 Year Total	8,918,715	11,779,215	797,245	638,397	22,133,572
30 Year Average	297,291	392,641	26,575	21,280	737,786
% of Total	40.30	53.22	3.60	2.88	100.00

1/ Data source: Final IBM computer runs, 1954-1982 and processor catch reports.
2/ Preliminary data.

Appendix Table 13. Chum salmon catch by district for Lower Cook Inlet, 1954-1983. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
1954	150,769	112,877	0	1,945	265,591
1955	24,938	40,887	278	3,147	68,710
1956	53,515	19,248	14,936	519	88,218
1957	57,403	138,171	10,856	20	206,450
1958	24,096	100,386	0	0	124,482
1959	13,976	59,996	23,574	13,301	110,838
1960	4,100	67,187	44,328	467	116,082
1961	2,916	40,212	12,465	0	55,593
1962	9,078	126,767	43,404	10	179,259
1963	7,523	117,095	13,892	0	138,510
1964	11,529	269,514	42,280	12	323,335
1965	2,458	22,443	3,175	0	28,076
1966	28,754	87,620	12,688	0	129,062
1967	23,416	37,533	24,221	275	85,445
1968	4,403	20,398	49,461	872	75,134
1969	2,600	5,400	53,193	10	61,203
1970	8,174	118,746	96,605	633	224,158
1971	2,857	118,995	26,237	423	148,602
1972	4,936	43,490	26,374	743	75,543
1973	3,588	76,341	35,584	0	115,513
1974	2,275	11,931	4,554	0	19,210
1975	5,428	11,350	4,868	0	21,646
1976	1,517	412	48,848	45	50,822
1977	6,723	70,167	65,659	3,229	145,778
1978	5,525	19,224	48,669	100	73,518
1979	12,759	180,558	29,711	0	223,028
1980	4,605	32,246	35,921	720	73,492
1981	23,880	238,393	73,501	3,279	339,053
1982	18,446	62,877	108,946	7,698	197,987
1983 2/	14,281	27,203	142,901	7,934	192,319
30 Year Total	536,389	2,277,667	1,097,219	45,382	3,956,657
30 Year Average	17,880	75,922	36,574	1,513	131,989
% of Total	13.56	57.56	27.73	1.15	100.00

1/ Data source: Final IBM computer runs, 1954-1982 and processor catch reports.
2/ Preliminary data.

Appendix Table 14. Pink salmon catch in thousands of fish for fishing districts in Lower Cook Inlet, 1936- 1983. 1/

Year	Catch	Year	Catch	Year	Catch
1936	526	1956	208	1976	136
1937	457	1957	286	1977	1,292
1938	345	1958	950	1978	353
1939	292	1959	124	1979	2,987
1940	1,659	1960	612	1980	890
1941	692	1961	303	1981	3,276
1942	695	1962	2,248	1982	552
1943	1,361	1963	204	1983 2/	927
1944	1,446	1964	1,055		
1945	1,302	1965	116		
1946	870	1966	579		
1947	1,396	1967	375		
1948	591	1968	585		
1949	366	1969	202		
1950	311	1970	574		
1951	378	1971	393		
1952	972	1972	29		
1953	513	1973	307		
1954	271	1974	51		
1955	1,184	1975	1,063		

	Total	Average
48 Year	35,377	753
Odd-Year (24)	19,796	825
Even-Year (24)	16,508	688

1/ Data source: 1953-63 data very sketchy - U.S.F.& W.S. Statistical Digest #50 and INPFC Document #1134, Rich & Ball; ADF&G computer runs, 1960-1982.

2/ Preliminary data.

Appendix Table 15. Pink salmon alevin density by brood year for non-index salmon streams in Lower Cook Inlet.

Year	Mayor	Bear	Salmon	Clear	Tonsina	Humpy	Thumb	Spring
1966								
1975								
1976	19.9	293.7	51.1	0				
1977								
1978	39.0	871.6 1/		3.2	89.6			
1980	161.7	538.4	238.3		188.6			
1981					130.9	10.8	10.8	379.3
1982	13.9	732.7	61.0	7.7		1.5	174.0	77.8
1983		25.7			176.2	585.7	752.1	155.1
Total	234.5	2,462.1	350.4	10.9	585.3	598.0	936.9	612.2
Ave.	58.6	492.4	116.8	5.5	146.3	199.3	312.3	204.1

Year	Barabara	South Nuka	Mikes Bay	James Lagoon	Dogfish Lagoon	Port Chatham	Ave.
1966		23.7				51.0	37.4
1975	500.3	318.5					409.4
1976							121.6
1977		741.2					741.2
1978							250.9
1980							281.8
1981							133.0
1982					6.8		134.4
1983			975.2	278.3	7.3		369.5
Total	500.3	1,083.4	975.2	278.3	14.1	51.0	1,738.0
Ave.	500.3	361.1	975.2	278.3	7.1	51.0	217.3

1/ Stream only partially sampled due to ice cover.

Appendix Table 16. Chum salmon alevin density by brood year for streams in Lower Cook Inlet.

Year	Dogfish Lagoon	Tutka	Port Graham	Seldovia	Windy Right	Fort Dick	Island Creek	Rocky	James Lagoon	Tonsina	Spring	Av
1964			39.4		57.7	250.7	75.3	39.8				92
1965			0.4	0.4	54.7	137.4	110.5	-				60
1966		13.6	0	0	18.5	115.5	188.8	7.3				49
1967		0	2.4	0	14.8	25.3	374.8	-				69
1968		0	27.0	0	83.0	19.7	120.8	-				41
1969		0	22.8	0	33.6	76.0	526.8	-				109
1970		0	0	0	160.9	0	244.6	-				67
1971		0	0	0	8.1	6.5	-	-				2
1972		0	54.9	5.1	-	3.5	170.4	9.0				40
1973		0	13.6	0	0	12.0	131.4	30.5				26
1974		0	0.2	0	-	32.1	-	0.2				6
1975		0	3.6	0	89.0	22.5	243.1	209.7				81
1976		0	23.8	0	0	14.0	-	37.9				12
1977		6.9	49.8	0	0.5	51.6	369.7	45.6				74
1978	426.1	150.6	131.5	26.9	0	136.7	258.8	2.2		183.2		146
1979		0	35.5	0	0	5.6	311.2	71.1		-		60
1980		0	121.3	0	2.8	0.9	295.3	-		19.7		62
1981		0	19.9	0	7.7	1.3	271.7	0		9.7	6.7	39
Total	426.1	171.1	546.1	32.4	531.3	911.3	3,693.2	453.3	0	212.6	6.7	1,045
Ave.	426.1	10.7	30.3	1.9	33.2	50.6	205.2	30.2	0	53.2	6.7	58